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ON

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Delivered before the Royal College of Surgeons of England on Feb. 4th, 1907,

BY WILLMOTT H. EVANS, M.D., B.S., B.Sc. LOND., F.R.C.S. ENG.,

SURGEON TO, AND SURGEON IN CHARGE OF THE SKIN DEPARTMENT AT, THE ROYAL FREE HOSPITAL.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—I hardly like to commence this lecture without some expression of my appreciation of the honour which has been done me in appointing me to the post which I now occupy. I will not venture to express any feeling of doubt as to my suitability for the position, for to do so would surely be to impugn the judgment of the Council. Rather would I declare my intention to do my best to justify the appointment. When Sir Erasmus Wilson founded this lectureship it was his earnest wish that the lectures should always deal with dermatological subjects, and though the Council at that time could not accede to the request, yet it was hoped that some at least of the lectures would be on diseases of the skin. Sir Erasmus Wilson himself lectured for eight years, but it is interesting to note that from 1878 to the present, though nearly 30 years have elapsed, this is the first Erasmus Wilson lecture which has dealt with dermatology.

I have called my lecture Leucoderma and Analogous Changes in the Pigmentation of the Skin, but I propose dealing with little more than the etiology of this disease and its allies, and that will afford me ample material for the time at my disposal, especially as I propose to discuss fairly fully the question of the characters of skin lesions associated with affections of the nervous system.

The amount of pigment in the skin forms one of the greatest and certainly the most striking of the differences between the various races of man. Even as to the origin and situation of the pigment there are at present some differences of opinion. There are certainly many pigment granules embedded in the columnar epithelial cells which form the basal layer of the epidermis, and in these the granules occur mainly at the margin of the cells. Some masses of pigment also exist in the lymph spaces which are situated between the epithelial cells and here they form branching figures in the centre of which sometimes a nucleus or a leucocyte can be seen. From the shape and situation of these groups of pigment granules it is not improbable that they are really special pigment cells, comparable with the chromatophores seen in the skin of frogs. In the very dark races the pigment is not confined to the basal layer of the epidermis, but it is also to be found in and between the cells of the prickle cell layer and the other strata as far as the transitional layer, and it is important to remember that in the derma also pigmented cells are to be found. The tint of the skin in the white races is due mainly to the colour of the superficial fat and blood-vessels, modified slightly by the epidermal pigment, and the essential colour of the epidermis itself. In dark races the greater amount of pigment in the epidermis and the pigment present in the derma hide the colour of the fat and blood-vessels.

The amount of pigment varies not only in different races but also greatly in different individuals of the same race, and even in different portions of the skin of the same person. Further, in one and the same portion of skin the degree of pigmentation may vary greatly from time to time. The most potent agent in increasing the pigment is to be found in the rays of the sun, especially in summer. The amount of increase may be great in those who "tan" easily, but if the exposure has not been too long the increase may completely disappear when the person is removed to a cooler climate or the season changes. In this country none of the browning of the summer survives more than a very few weeks of autumn. We have no reason to think that this increase of pigment is in any way different in nature from the normal pigmentation of the skin; it is a pure increase in quantity of the pigment in the normal situation. These vast differences in colour may occur in those who are in perfect health and therefore we are justified in calling them physiological. Still, it is of interest to note that for the most part these changes are in the direction of an increase of pigmentation and not in its diminution.

Loss of pigment of the skin may occur from many causes: it may follow an injury or an inflammation; it may occur in the anæsthetic variety of leprosy; it may result from the retrocession of a psoriatic patch; and it is not at all rare as a sequela of a secondary syphilitic eruption, and this last is sometimes called syphilitic leucoderma. I mention these forms merely for the purpose of saying that I do not propose to deal with any of them to-day; the problems connected with them are of great interest and importance but they are not identical with that which I propose to investigate. Occasionally both in white and coloured races pigment may be wholly absent from the skin. In these albinos there is generally nothing betokening any failure of general health, and apart from the interference with vision these persons suffer nothing from the absence of pigment.

Although leucoderma or vitiligo is doubtless familiar to you all it may not be amiss for me to describe briefly the main characters of the disease. Leucoderma may occur at any age, though the middle period of life is that at which it is most commonly met with and from 20 to 40 years of age it is most frequently seen. It has been observed as early as the fourth year and it has also been seen to commence in advanced old age. It is not very rare but it is probably much more frequent than statistics would suggest. Hebra met with it six times in 3000 cases—that is, once in 500—and Dr. H. Radcliffe Crocker's experience is much to the same effect. In my own practice the frequency was one in 450. Erasmus Wilson saw it once in 400 cases; others have seen it less frequently; McCall Anderson met with it only once in 2500 cases.

My own impression is that the disease is more common than these figures would suggest. There are certainly many cases which never apply for treatment—either the amount of whitening is slight or the affected parts are completely covered by the clothes. The two sexes are fairly equally affected, though in Lévi's statistics there were three times as many men affected as women; but there must have been some special cause for this unusual predominance in his cases, for no one else has met with it. The disease is certainly more commonly seen in the coloured races. This is partly to be ascribed to the fact that it is more easily recognisable in those who are naturally dark than in the fair, for the loss of pigment must be the more recognisable the more pigment there is to lose. But this probably does not explain the whole of the apparent greater frequency in coloured races, for no small proportion of the most marked cases seen in this country have acquired the disease in warm climates. I am inclined to think that warm climates, especially tropical climates, have a definite etiological importance. Even in this country exposure to the sun seems to assist in the production of leucoderma, but this may be in part at least due to the fact that on a darkened skin unpigmented spots will be more readily seen. When many patients suffering from any disease are carefully examined leucoderma is often found to be present, unknown to the patients themselves; therefore, it must be obvious that statistics based on dermatological clinics cannot be depended on for informing us as to the frequency of the disease.

Leucoderma begins by the appearance of small round spots of a clear white. These steadily increase in size and by growth and coalescence large white patches of irregular shape are formed. They have a very definite, clearly defined margin, and this is always convex towards the unaffected skin. This convexity shows in itself that the white area is the abnormal portion and that it is invading the surrounding skin. This is important in diagnosis, for the patients themselves often imagine that the white skin is the healthy portion and they ask for treatment of the darker skin. The patches are, as I said, white; it is the whiteness of an albino, it is an absolutely dull whiteness, not unpleasing in itself but contrasting unpleasantly with the surrounding pigmented area. Any hairs on the affected part nearly always lose their colouring matter and occasionally the hair may fall, but this is quite exceptional. The surface is absolutely unaltered in level; it is not in the least raised above or sunk below the level of the surrounding skin and its sensibility is never affected in the slightest

degree. The change is merely a change of colour and nothing more. In certain cases each whitened area is surrounded by a zone of deeper pigmentation; this is certainly not always present and Mr. Jonathan Hutchinson denies its existence; he maintains that the apparent darkening is merely an effect of the striking contrast between the normal and the depigmented part. He claims that if the whitened areas be covered by pieces of brown paper no marginal increase of pigmentation will be visible, and that this is so sometimes I fully agree. I admit that there is often thought to be an increase of pigment when there is not, but cases certainly do occur in which this circumferential super-pigmentation definitely exists. Some suggest that an increase of pigment everywhere precedes the loss of pigment even at the commencement, but with this I do not agree.

I have left to the last one of the more important characters of leucoderma and that is the symmetry of the affection. Sometimes it amounts to little more than a tendency to symmetry, but often the symmetrical distribution is extremely well-marked, so that for each patch on one side of the body there is an exactly corresponding patch on the other. In some there is no attempt at symmetrical distribution and the disease may even be unilateral. The general tendency of each patch is to spread at the margin, and thus large white areas may be produced which are very striking when the patient belongs to a dark race. Occasionally it happens that the depigmentation is so very extensive that a darkly coloured person, such as a negro, may become almost white. Occasionally some retrocession will occur and complete recovery is possible though far from common.

I think I have described sufficiently the general characters of the disease and I now proceed to discuss its etiology. On this point the text-books are almost unanimous. In Mr. Malcolm Morris's treatise on the diseases of the skin we find it stated that "there can be little doubt that leucoderma is a disease of neurotic origin." Dr. Radcliffe Crocker says in his valuable and well-known work on the diseases of the skin: "There are strong grounds for regarding the disease as due to an angio- or tropho-neurosis." Dr. Henry W. Stelwagon of Philadelphia says: "It is undoubtedly to be looked upon as a neurosis and of more frequent occurrence in neurotic individuals." Hyde and Montgomery of Chicago say that "there are strong probabilities that it is due to the influence of perturbed innervation." I have quoted authorities from different parts of the world to show that the idea is generally received. It would serve no useful purpose to increase the number of quotations, for they would all, or almost all, be to the same effect. When we proceed to investigate the reasons on which the generally received opinions are founded we find that it rests on three points, which are well put by Hermann Streit in his dissertation on Vitiligo. First, the symmetrical distribution of the disease; secondly, the concurrence of the leucoderma with pathological conditions of the nervous system; and thirdly, the existence of degenerative changes in the peripheral nerves in cases of the disease, as observed by Leloir and Chabrier. We will consider these in order. There is a very widespread idea in dermatology that the symmetrical distribution of an eruption is an indication, or at least a suggestion, of its nervous origin, but this idea rests on a very small foundation. Only too often does it happen that when our knowledge of the etiology of a disease of the skin is minute and unsatisfactory the aid of the nervous system is invoked to account for its production, and it is said it must be nervous in origin. I hope to show that symmetry of distribution is in no way a sign of a connexion with the nervous system. I am much inclined to believe that the custom of ascribing to a nervous origin the symmetrical eruptions is chiefly due to the idea that the affected areas correspond to the areas of distribution of certain nerves.

In my opinion leucoderma is eminently suitable as a test case in this matter, for in it we have not a multiple of changes; there is nothing that can really be called an inflammation, nothing that is really atrophic—we have merely a single change, loss of pigment. Therefore the problem is as much simplified as possible.

Now there is certainly one disease of the skin as to the nervous origin of which there can be no dispute and that is herpes zoster, for there is no doubt as to the existence in typical cases of this disease of inflammation in the ganglion on the posterior nerve root. Now this disease, undoubtedly due to a nervous lesion, is remarkable in that it only affects one side of the body; it is true that on intensely rare occasions cases have been recorded in which a herpes zoster was bilateral, but none will deny that these bilateral cases are very exceptional and do not occur more than once (let me say) in ten thousand times. Therefore it is clear that the mere fact that a skin lesion affects both sides of the body is in itself no evidence in favour of its being nervous in origin, and in fact, so far as we may judge from herpes zoster, it is evidence against it.

The distribution of leucoderma and other similar diseases has had, I think, something to do with the idea of a nervous origin. The patches and streaks are supposed to correspond to nervous areas. Whether this correspondence does occur is very easily tested. A nerve area must be one of three kinds: first, it must either be the area over which a nerve root is distributed or it must be the area of distribution of a peripheral nerve or of a branch of a peripheral nerve. I can imagine no other form. Now these several areas are definitely known and it is an easy matter to decide whether any special patch does or does not correspond to a nerve area. In the case of the dorsal nerves the areas of distribution of the nerve roots and of the peripheral nerves themselves are almost identical, for no nerve plexus is formed by the dorsal nerves; and the only difference between the distribution of a dorsal nerve root and an intercostal nerve is that in the former case we have the posterior primary branch of the dorsal nerve in addition to the distribution of the intercostal nerve, but in the cervical, lumbar, and sacral regions, extensive plexuses are formed, by which the fibres of individual spinal nerves are much mingled, so that the areas of the named nerves differ greatly from the areas of supply of the nerve roots. Here is a representation of the surface distribution of the spinal nerves, according to Kocher; but it differs only immaterially from those drawn up of other observers. Here I have a representation of the nerve root supply of the forearm both anteriorly and posteriorly, and now I show you also a view of the forearm with the peripheral nerve areas marked. You will see how greatly these two sets of nerve areas differ from one another; yet the white areas in a case of leucoderma are seen not to agree with either of them if we examine them carefully. [Many lantern slides were shown to illustrate the fact that leucodermic patches do not occupy nerve areas.]

Again, as I have mentioned already, the disease may become very extensive, and only patches of healthy skin are left; when this happens we are justified in thinking that if the affected areas are nerve areas the unaffected patches should be nerve areas also, that is clear; but an examination of such cases will show that this is not the case. In one example, when nearly the whole face had lost its pigment the area still pigmented did not correspond to the area of supply of any nerve or nerves.

We come now to the third possibility. If leucoderma areas do not correspond either to nerve root areas or the areas of distribution of individual nerves, can it be that they represent the areas of supply of minute peripheral branches? Here, again, a careful comparison of leucodermic patches will show that there is no such correspondence. A white patch may begin on the border line between two nerve areas and it will spread indifferently in all directions, showing that neither in its origin nor in its mode of spreading does the patch bear any relation to the distribution of the cutaneous nerves.

The second reason which has been advanced for considering that leucoderma is nervous in its origin is its association with other manifestations of nervous disease. Many of the patients are said to be neurotic; Lebrun even says that he considers that the presence of leucoderma is always a reason for looking for other neuroses. Rayer described a case in which leucoderma appeared in a man soon after he had lost a large sum of money, though he does not tell us how long an interval elapsed between the loss of the money and the appearance of the leucoderma. Other instances are recorded in which it has followed violent mental emotions. Cases have been described in which chorea and hysteria have been present. In most cases the reports are not sufficiently definite to enable us to decide what real nexus there was between the nervous manifestation and the skin lesion. Lastly, it has been claimed that there is a close relation between mental unsoundness and leucoderma. In this connexion Hermann Streit examined 1026 cases of mental disease in three asylums and amongst these there were only six of true leucoderma, a percentage hardly above that recorded by some observers amongst all cases seen at dermatological clinics, and it must not be forgotten that

these 1026 cases were examined specially for leucoderma. The conclusion which I am inclined to draw from these cases of the association of leucoderma with one form or another of nervous disease is that in all probability the connexion is either casual or the two morbid conditions are the result of a common cause. As for the statement that some leucodermic patients are neurotic, we must bear in mind that the disfigurement is in itself enough to disturb the mental equilibrium of sensitive patients and most of the cases we see in practice are cases in which the patients have come for treatment in consequence of the impairment of their appearance, so that too much stress must not be put on the neurotic characters of leucodermic patients.

Lastly, we come to the statement to which I have already referred, that degenerative changes have been found in the peripheral nerves. This statement appears to depend chiefly on an observation by Leloir on a piece of skin removed from a case described by Chabrier in a monograph on leucoderma. He says: "Amongst the nerve fibres were many fibres much altered and showing numerous lesions of atrophic neuritis. In some the axis cylinders had completely disappeared and the myelin was broken up into droplets." Although these researches were made 25 years ago, up to the present, so far as I know, they have not been confirmed. Moreover, we have a fact of the utmost importance to assist us in deciding this question. If, as Leloir says, from 10 to 25 per cent. of the nerve fibres in a leucoderma patch are degenerated, how is it that we have no modification of sensation in the part, for certainly we find none. There is no anæsthesia or hyperæsthesia, no paræsthesia of any form. Is it likely, nay more, is it possible that so much nerve degeneration should be present and yet the sensation of the part should be wholly unaffected? Until the nerve degeneration has been fully confirmed I hold that we are justified in doubting its existence, and I am inclined to think that Leloir's case was probably not a case of true leucoderma.

Having then failed to find in the nervous system any adequate explanation of the phenomena of leucoderma we must seek for it elsewhere. When we consider the cutaneous distribution of substances carried to the skin by the blood stream we find bilateral symmetry, or a tendency to bilateral symmetry, one of the special characteristics. In some cases, as with nitrate of silver, the whole surface of the body is affected, yet even in this case some areas are more deeply pigmented than others; thus it is more deeply marked on those parts which are exposed to light, as the face and hands. Now in this case there can be no doubt that the poison has been distributed by the blood stream, for the silver is found in the skin itself. Similarly, other mineral poisons affect the skin and give rise to various skin lesions. Those that are best known are the eruptions caused by the halogens, such as iodine and bromine and their compounds. In this case the eruption is less widely spread; it appears especially on exposed parts and has a very great tendency to symmetry. Arsenic, too, is a mineral substance which has a great affinity for the skin when it is administered internally and it gives rise to cutaneous manifestations; the most common form is the brownish pigmentation which is liable to follow the long-continued administration of the drug. This is found chiefly on the trunk and on the palms and soles and it is distributed symmetrically on the two sides; in some cases it is not distributed uniformly but in a patchy manner. I must acknowledge that some have held that these drug eruptions are not due to the local action of the poison but to an action on the nerves. The subject is large and time will not permit of a discussion; suffice it now to say that, in my opinion, the evidence of the local action of the drug overweighs the argument on the opposite side and one great point is that the drug is certainly found locally where the eruption exists. It may not unreasonably be asked why, if the poison is carried about by the blood stream, it is not spread evenly over the whole surface of the body? The answer to this is that the structure and nature of the skin are not identical over the whole surface but vary from one part to another, though the corresponding points on the two sides are almost identical. Thus it comes to pass that a poison circulating generally in the blood may be deposited only in certain regions of the body where the conditions are favourable. Now this bilateral symmetry, or perhaps better, this tendency to bilateral symmetry, will be noticeable in all cases in which a poison is distributed by the blood stream, quite irrespective of the nature of the poison. It may be a mineral or an organic toxin, or it may be microbic. Thus in all the exanthemata the specific micro-organisms or their toxins are distributed by the blood and reach the surface by that channel. In some cases, as I have said, it is the toxin which is carried to the skin and there gives rise to lesions; in others the specific micro-organism is distributed by the blood. This latter condition is well seen in the secondary syphilitic eruptions, for the presence of the spirochæta pallida has been proved in these secondary lesions, and, moreover, secondary manifestations are contagious. In small-pox, too, the micro-organism is carried by the blood stream to the whole skin but in most cases the lesions, though symmetrical, are unequally distributed, for as a rule the face and hands are the most affected. In these two conditions—eruptions from the administration of a mineral poison and the cutaneous manifestations of acute specific disease—we have, I think, the best examples of skin lesions produced by the distribution of the *causa causans* by the vascular system.

I do not attempt to deny that there are some symmetrical eruptions which are due to the local action of micro-organisms acting from without. Some cases of tinea illustrate this point very well, and such instances are to be explained by the similarity of the soil on the two sides of the body on which the organisms grow. Such cases, however, form merely the exceptions, and I wish to lay it down as a general rule that the mere fact that a skin affection is symmetrical in distribution is in itself *primâ facie* evidence that its cause has been brought to the skin by the blood. It would follow from this as a corollary that the symmetrical distribution of a skin lesion is greatly opposed to its being caused by the action of the nervous system.

When we come to consider the histological appearance to be seen in a case of leucoderma we find that, apart from Leloir's description of atrophy of the nerve fibres, which has received no confirmation from the observations of others, there is a general agreement as to the conditions present. The best account is given by Wermann. The pigment granules are absent from the affected spot, both those in the basal epithelium and those which occur between these cells. At the margin of the leucodermic patch, where the pigmentation is increased, there is no obvious increase of pigment in the epidermis, but in the derma there is a marked increased pigmentation, especially in the papillary layer, but also around the blood-vessels, the hair follicles, and the sweat glands are numerous pigmented cells. Wermann has also shown that there is pigment in the cutis even of the whitened areas, though it has disappeared from the epidermis.

We have now to consider whether there are any other pigmentary changes in the skin which are in any way analogous to those met with in leucoderma. In the first place we have the whitening of the hair which generally occurs with advancing years. The resemblance of this depigmentation to the loss of pigment in leucoderma is very striking, but we are so much accustomed to the bleaching of the hair with age that we hardly regard it. Yet the analogy with leucoderma is very close and, as I hope to show later, the pathological process is in all probability closely allied. Histologically the changes are very similar. This seems to be the best place to mention a very interesting and important observation which was first made by Karg. He found that if a piece of skin taken from a European, a white man, is grafted on to the body of a negro only a short time elapses before pigment begins to appear in the white skin area, and ultimately the whole graft becomes black like the normal negro skin. Further, if a piece of skin from a negro be grafted on to the body of a white man depigmentation rapidly sets in, and at last the new patch is of the same pale colour as the surrounding skin.

There are several instances to be found where the pigment of a part has been increased in amount in areas very similar to those in leucoderma where the pigment is diminished. One of the several conditions that have been described under the name of chloasma bears a very close relation to leucoderma. This is the so-called chloasma uterinum. In this disease brownish or yellowish patches appear generally with a well-defined border. They occur most commonly on the forehead but may in some cases spread to a great part of the face or even invade the trunk and limbs. It is generally associated with pregnancy, but it may occur after various forms of uterine disease. A very similar condition has been described by de Mussy in cirrhosis of the liver with ascites and he has also seen it in a case of carcinoma of the stomach. Dr. Radcliffe-Crocker has met with it in a woman who had

no uterine disease but who suffered from very severe and long-lasting constipation. The explanation that is always given of these cases of chloasma is that they are caused by the uterine irritation acting by means of the nervous system. This explanation has but little basis of fact and I would suggest that the pigmentation is much more likely to be due to the action of chemical substances circulating in the blood stream.

Some ten years ago Ribbert showed that the hypertrophy of the mammary gland in pregnancy was not due to any nervous connexion between the uterus and the breast, for the hypertrophy occurred in a mammary gland which had previously been transplanted into the neighbourhood of the ear. And still more recently Miss Lane-Claypon and Professor E. H. Starling have shown that the stimulus leading to the mammary hypertrophy is definitely a chemical substance derived from the fœtus and placenta. These chemical substances are absorbed by the uterine veins, conveyed by the maternal circulation to the breast, and there give rise to the hypertrophy. Thus we see that no nervous influence takes part in this important change. This is only one instance of many in which physiological processes are now known to be due to the stimulus of a chemical substance though formerly thought to be due to a nervous influence. I would therefore suggest, as I have said, that this abnormal pigmentation seen in chloasma uterinum is similarly produced by a chemical toxin. This explanation also is much more probable when we have to consider the other cases of chloasma already mentioned, where disease of the liver or chronic constipation appears to be the cause. In these cases it is difficult to believe that there is any nervous nexus between these diseased organs and the portions of skin where the pigmentation occurs; but that a chemical poison may be present in the cirrhotic liver, or the ascitic fluid, or the loaded colon is more than probable. I have alluded to these forms of chloasma because I think they furnish us with a clue to the causation of leucoderma. I think it also important that some observers have met with cases of localised scleroderma and also alopecia areata associated with leucoderma, for I hold that localised scleroderma and some cases of alopecia areata are also of toxic origin and are not connected with any nervous lesion.

In attempting to discover the cause or causes of a disease such as leucoderma, which may last for many years, it is advisable to consider what conditions immediately preceded or accompanied the first appearance of the disease. It is not sufficient to record those morbid conditions which are found to be present at a period some, or even many, years after the commencement of the malady. When an affection extends over a number of years it must happen that many other diseases co-exist with it from time to time, and yet have nothing to do with it from an etiological point of view.

Now I have been struck in the examination of cases of leucoderma with the large proportion in which there have been morbid affections of the alimentary canal, and especially some form of ulceration. I will quote an instance. A woman, 38 years of age, has suffered from leucoderma for 16 years, the neck and forearm being chiefly affected. The whitened patches first appeared while she was in India, and they showed themselves during a severe attack of dysentery from which she suffered at intervals during nearly the whole of her stay in India. About a month after the first appearance of the leucoderma she gave birth to a son, now 16 years of age. When he was about nine years old he began to develop patches of leucoderma, chiefly on his arms but also on his neck. This is a striking case. The relation between the ulceration of the colon and the appearance of the disease in the mother was very close and the occurrence of the disease in the child born soon after is also noteworthy. I have already mentioned that of the cases of leucoderma seen in this country a curiously large proportion have lived in a tropical climate and have suffered from dysentery or enteric fever. Even when the disease occurs in those who have never left this country there is frequently a history of some morbid intestinal condition having existed not long before the first manifestation of the disease. I would not venture to assert that some intestinal inflammation or ulceration must precede in all cases the appearance of leucoderma, but the frequency of such a connexion seems to me to justify the suggestion that the cause of the skin lesion is to be sought in the alimentary canal and that this cause is in all probability a toxin which is absorbed from the intestine, carried by the portal blood stream or by the mesenteric lymphatics into the general circulation, when it produces its local effect on the skin.

The chief localising factors are, in my opinion, mechanical or chemical, trauma and light. It has been seen to occur at points of pressure. Its frequent appearance on the neck I would suggest may be due to the pressure and friction of the collar, the light acting here also as an adjuvant cause. The frequency of the occurrence of leucoderma on the hands and forearm would also be explicable as due to the action of external bodies, mechanically or chemically, favoured here also by light. In this connexion it is of interest to note that it is more common for the forearm to be much affected in those who are in the habit of working with their forearms bare.

As to the actual mechanism by which the depigmentation is produced, I think we may obtain an insight from a consideration of the work of Metchnikoff on the bleaching of the hair in age. He has shown that the loss of the pigment granules of the hair is due to the action of a large number of macrophages which, swallowing the pigment, convey it away and leave the hair free from pigment. He is inclined to consider that the superactivity of these macrophages is due to the stimulation of some toxin formed somewhere in the body, probably in the alimentary canal. In this way are best explained the pigmentation and the depigmentation of transplanted skin when it is of a different hue from that of the person on whom it has been grafted. The pigment is brought to the skin or removed from it by wander cells.

In the same way I would explain the loss of the pigment of the skin in leucoderma. The excitant is some toxin probably arising from a diseased alimentary canal, but possibly from some other part of the body. This toxin stimulates macrophages to attack the pigment of the skin, the locality of their action being determined by trauma and light. The pigment removed by these macrophages from its own site is carried downwards into the derma and also outwards in a centrifugal direction. In this way is explained the increased pigmentation often seen at the margin of the bleached patches. As the amount of toxin increases or diminishes or the local adjuvants vary in intensity so does the activity of the macrophages wax or wane, so does the patch increase in size or remain as it was. Seldom, indeed, is it that the peccant macrophages can be induced to retrace their steps and to deposit once more the pigment where it should be; but when this happens the whitened patch regains its normal colour; but far more commonly the depigmented area remains free from pigment till the end of life.

To sum up in a few words the spirit of this lecture. I hold that in no way does the nervous system have any act or part in the production or the localisation of the patches of leucoderma; that the disease is in all probability due to the action of some toxin, derived from the alimentary canal, assisted by local injury and the action of light; and that the mechanism by which this is carried out is the vital action of peripatetic cells.

Erasmus Wilson Lecture

ON

INJURY AND DEFORMITY OF THE EPIPHYSIS OF THE HEAD OF THE FEMUR: COXA VARA.

Delivered before the Royal College of Surgeons of England on Feb. 6th, 1907,

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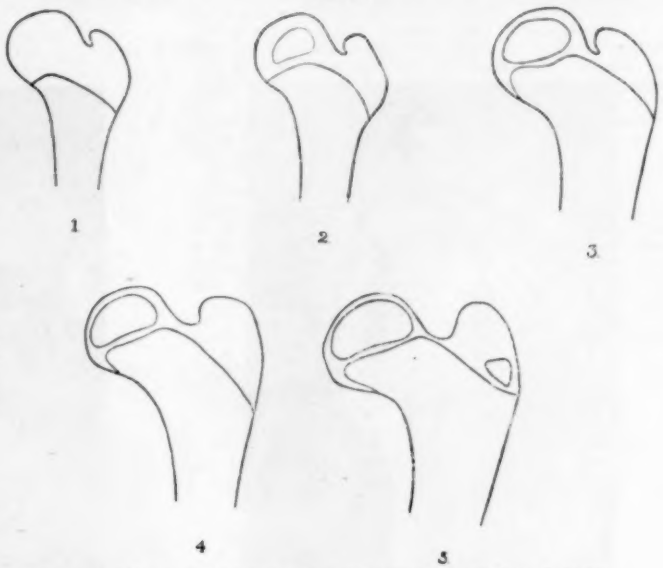
MR. PRESIDENT AND GENTLEMEN,—During the last 18 years the subject of coxa vara has attracted a great deal of attention from clinicians, but in this country at least it has not received that careful attention to its pathological anatomy which is essential if the cause of the condition is to be satisfactorily explained. Except on the part of one or two observers such as Hofmeister and Royal Whitman, the published records have been of isolated cases, and the radiographs have been for the most part worthless; I have therefore

preferred to draw conclusions chiefly from my own observations. During the last three years I have been able to collect particulars of 62 cases of this deformity; most of these have come under my own observation, but some have been taken from hospital records and in a few of these the clinical account is defective. As examination by means of the x rays gives in most cases the only clue to the pathology I have rejected any case in which I was unable to obtain a fairly good radiograph. A consideration of these cases and of the few museum specimens existing soon showed two points, that more than one anatomical class of deformity is included under coxa vara, and that in a majority of cases the origin of the deformity is connected with the mode of growth of the neck of the femur.

In the fœtus of eight months the head and neck of the femur, together with the great trochanter, consist of a single mass of cartilage separated from the shaft by a line of ossification which is nearly transverse, and which by its growth adds to the length of the shaft. At birth this line of ossification has become a little higher and slightly oblique, bone now extending into the lower part of the neck; this alteration becomes more evident during the first and second years, the lower half of the neck consisting now of bone, the upper half constituting a cartilaginous bridge connecting the head to the great trochanter. It is only in the fourth year of life that the line of ossification eventually reaches the upper surface of the neck thus completely separating the originally single mass of cartilage into the epiphyses of the head and of the great trochanter. (Fig. 1.)

It will thus be seen that up to the fourth year there is a single more or less transverse epiphyseal line, by ossification at which addition to the upper end of the shaft and of the lower part of neck is occurring. After this time there are two such lines, that between the great trochanter and the shaft and that between the head and the neck. No very considerable growth occurs at either of these lines, but whereas the former merely adds to a slight extent to the adjoining part of the neck and shaft, the latter is responsible for the development of the femoral neck and as we shall see is liable to injury and deformity.

FIG. 1.



Diagrams of the upper epiphyseal region of the femur. 1, At birth. 2, At one year six months. 3, At two years nine months. 4, At four years. 5, At five years six months. From radiographs.

The natural angle of the femoral neck has been specially investigated by Humphry; it varies greatly in different individuals but averages 125°, is wider in long bones than in short and wider in men than in women. Humphry also found that the angle in the fœtus at birth is 140° and that it diminishes with growth up to the period of adolescence, but that, apart from pathological conditions, it then retains its form for the rest of life.

COXA VALGA.

This gradual decrease of the angle is undoubtedly due to the effect of the body-weight. Accordingly, this same observer found that in limbs which for some reason had never borne this weight the angle was in the adult as great as it should be in the fœtus. The conditions to which this coxa valga are due are paralysis affecting the whole limb, amputation through the thigh, or any condition rendering the child bedridden. In order to produce much effect these causes must arise quite early in life. Humphry called attention to the wide angle in cases of severe hydrocephalus and Turner has described it in cases of vicious ankylosis of the knee and of genu valgum.

It is very doubtful if coxa valga exists as a condition recognisable clinically apart from these conditions. Max David has reported the case of a child who walked with both limbs inverted, abducted, and flexed, as coxa valga. It seems on the face of it improbable that this condition of the femoral neck could cause symptoms, and, unless by very careful methods of radiography, it cannot be accepted as possible to measure accurately the angle of the femoral neck during life.

COXA VARA.

Historical.—There has been some discussion as to the priority of description of the condition of coxa vara. Fiorani, in 1881, appears to have been the first to recognise cases of bending of the femoral neck clinically; he described 15 cases, in all but one of which the symptoms arose when the child first walked. Whilst Fiorani's cases are in most points well described it is remarkable that they were nearly all in girls, and that there was never any limitation of movement, even of abduction. Seeing that it is just in these infantile cases that adduction is most marked, and remembering the frequency of congenital dislocation in females and the occasional difficulty in diagnosing this from infantile coxa vara, it is probable that in at least a proportion of the cases Fiorani was mistaken in his diagnosis.

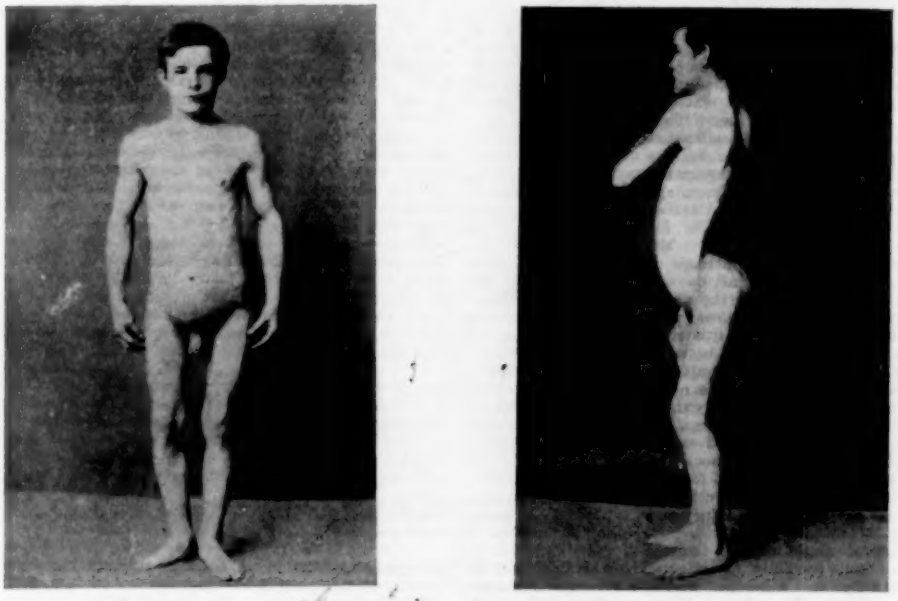
In 1888 Keetley described a case in which he recognised the seat of deformity as the upper epiphysial region of the femur and the cause as a softening of the bone and not disease of the joint. He removed a wedge of bone from below the trochanter and greatly improved the patient's condition. Unfortunately Keetley's paper was accompanied by a very misleading diagram. In the following year (1889) Müller gave the first full anatomical description of the condition, recording four cases, in one of which the hip-joint was resected under a mistaken diagnosis. Kocher, in 1894, published three cases, two of which were treated by resection; he described adolescent coxa vara in full and first used the name. In the same year Hofmeister published a long series of cases and showed that the condition may have its onset in earlier childhood. Lauernstein had previously described the depression of the femoral neck found in a rickety child, a condition which, however, had been recognised long before. Since 1894 an enormous literature on the subject has arisen, especially in Germany, and the different varieties of the deformity have gradually been sorted from each other.

Varieties of coxa vara.—1. Congenital. 2. Infantile. 3. Adolescent: (*a*) acute traumatic; (*b*) traumatic but following the injury after an interval; and (*c*) without trauma. 4. The result of known diseases causing softening of bone: (*a*) rickets; (*b*) osteitis deformans; and (*c*) osteo-malacia. 5. The result of acute or chronic inflammatory processes:

(*a*) tuberculous disease; and (*b*) epiphysitis. 6. Osteo-arthritis. 7. Traumatic—i.e., the result of union of fractures of the femoral neck.

Congenital coxa vara.—The deformity resulting from depression of the femoral neck is not, as a rule, evident until the child commences to walk. It is on this account extremely difficult to prove that in any individual case the defect is truly congenital, and very possibly some of the cases at present classed among the infantile variety have their origin in utero. I have indeed suggested that an injury at birth may be one of the factors in the production of this particular deformity. However, occasional congenital imperfections of the upper epiphysis of the femur do occur and a few clear cases have been recorded. These have without exception shown other associated defects of the limb, such as intra-uterine fracture of the tibia with deficiency of the fibula (Reiner), talipes equino-varus and genu valgum (Kredel) or defective growth of the femur, as in the following case which has come under my observation.

FIG. 2.



Anterior and lateral views of a boy, aged 14 years, with bilateral infantile coxa vara. From a patient under the care of Mr. Laming Evans.

The patient, a female, aged 19 years, was under the care of Mr. E. Laming Evans at the Royal National Orthopædic Hospital. The deformity of the right lower limb was said to have been present at birth; the birth, however, was natural. At 19 years of age there was eight and three-quarter inches of shortening in the limb, practically all this occurring between the anterior superior iliac spine and the knee. The thigh was greatly adducted at the hip and abduction at this joint was abolished; all other movements remained free. There was also a moderate degree of genu valgum. A radiograph of the hip-joint showed that the epiphyses at the upper end of the femur were no longer distinct, the neck was depressed to less than a right angle, and secondary adaptive changes had taken place in the bone. The head of the femur showed a flattened surface where it was in contact with the acetabulum and new pressure lamellæ could be seen passing upward from the root of the neck: (1) inwards towards this flattened surface, and (2) directly upward into the great trochanter.

INFANTILE COXA VARA.

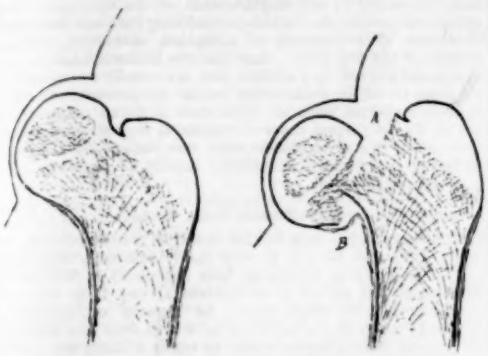
The cases of coxa vara occurring in children before the adolescent period present very distinctive features. This group was recognised by Hofmeister under the name of coxa vara adducta and by other German authors is alluded to as coxa vara of healthy children, that is children not suffering from rickets.

Clinical history and symptoms.—Coxa vara in children is more equally distributed between the two sexes than it is in later years; of 20 there were eight boys and 12 girls. Whilst this equality in so small a number of cases does not go for much, the published records render it certain that there is not the great disproportion seen in the adolescent form. A bilateral deformity was present in eight out of 20 cases, again a much larger proportion than in adolescents, and this observation is also corroborated by the literature. The onset of the condition is apparently very insidious, parents or patients being in many instances unable to fix even approximately the time when the symptoms appeared. In a considerable proportion, however, seven out of the 16 cases in which there was an accurate history, a waddling gait had been noted when the child first commenced to walk; in most of the others the symptoms became evident between the ages of six and eight years, that is when the children commenced to grow rapidly. The patients have come under observation at ages varying from five to 26 years; there is no essential difference in the symptoms at the different periods, but there are great differences from the adolescent form. The hip is permanently flexed often as much as 30° to 40° and greatly adducted, the limb being sometimes inverted but usually everted, though the extreme eversion seen in some of the adolescents does not occur. The movements of the hip-joint are never restricted in all directions; there is no period of immobility, but complete extension is generally impossible, rotation is limited often in both the outward and inward direction, and abduction is usually completely abolished. The result of this condition of the hip-joint is to cause lordosis, sometimes of great degree, prominence of the trochanter, and in unilateral cases much apparent as well as an inch or more of real shortening, the great trochanter being displaced upward to a degree corresponding with the real shortening. In the bilateral cases the lordosis is usually very great, the legs tend to cross and walking is very irksome, the body swaying from side to side, and the whole condition simulating that of double congenital dislocation of the hip. The symptoms increase in severity with growth; there is great disability, and often

periods of considerable pain in the hip occur, brought on by any exercise, as well as the stiffness and discomfort which patients with coxa vara always feel after sitting still. (Fig. 2.)

Very occasionally there is a clear history of this variety of coxa vara following injury. Joachimsthal has described such a case arising in a little girl after a slight injury occurring during the fifth year, in which the clinical and radiographic appearances corresponded exactly with those in the

FIG. 3.



Diagrams illustrating the probable mode of production of infantile coxa vara. A, V-shaped infraction produced above. B, Periosteal attachment below.

months later her mother noticed that she was lame and took her to Guy's Hospital. She was treated first as an in-patient, then in a Thomas's splint, and said to be cured. It seems that the diagnosis of tuberculous disease was made. At the age of 13 years the left lower limb was shortened and adducted. The great trochanter was half an inch higher than on the right. The movements at the hip-joint were free, except that extension was incomplete, causing some lordosis, and abduction was impossible. There were no scars. The real shortening was half an inch; the apparent shortening was one and a quarter inches. A radiograph showed depression of the whole femoral neck to less than a right angle, the head overhanging the neck below and there being a clear infraction in the neck above.

Pathological anatomy.—For the pathological anatomy of this variety of coxa vara we have to look chiefly to radiographic evidence; the only two resected specimens are those of Hoffa and Robert Jones, both showing late stages of the deformity. Specimens from another bilateral case are in the museum of St. Bartholomew's Hospital; they were removed from the body of a woman in the dissecting room and were without history; they have been hitherto catalogued as fractures of the femoral neck, but having regard to the fact that the condition was bilateral and that the appearances agree exactly with those in Jones's specimen I think there can be no doubt that they are really instances of this deformity.

In radiographs of two cases of deformity taken at the age of five years a downward displacement of the head of the femur carrying with it the adjoining portion of the base of the neck is seen. If this has occurred in the manner shown in the diagrams, at some time before the cartilaginous bridge in the upper part of the femoral neck has disappeared, it will be understood that the lower part of the separated

FIG. 4.

Radiograph of the right hip of a girl, aged 15 years, in whom bilateral infantile coxa vara of a severe degree existed. Showing the depression of the whole femoral neck with a V-shaped infraction in its upper border. (Radiograph by Dr. David Morgan.)

FIG. 5.

Specimen of infantile coxa vara with a strong bony neck to the femur, from the Museum of St. Bartholomew's Hospital, without history.

non-traumatic cases. The following case also illustrates the point.

The patient, a female, aged 13½ years, was an out-patient in the orthopædic department of St. Bartholomew's Hospital. The following history was obtained. At three years of age she fell off a chest of drawers on to her left thigh. The hip was painful but she was able to get up and walk. Three

fragment will probably be retained in apposition with the base of the femoral neck by its periosteal covering, whilst in the upper part a V-shaped gap will appear owing to the solution of continuity of this cartilaginous bridge. This displacement, whether occurring as the result of a sudden accident or by a process of gradual slipping, exactly accounts for the appearances in radiographs.

The normal epiphyseal line of the femoral neck is almost horizontal in direction, the newly formed bone being thus protected from cross strain; when the head has been displaced, however, the downward pressure of the body weight, transmitted through the upper margin of the acetabulum, is directly transverse to the line of the infraction that has been produced and nearly transverse to the epiphyseal line. It would, therefore, be expected that with increasing age the displacement of the head would increase owing to this mechanical factor. (Fig. 3.) Moreover, the neck of the femur which develops from this epiphyseal line chiefly after the fifth year will be developed in the wrong direction, owing to the line of growth being now nearly vertical instead of horizontal. Finally, it might be expected that below, where the displaced fragment remains in contact with the base of the neck and is covered by periosteum, close union would occur, whilst in the upper part the V-shaped gap is likely to persist as an infraction, and fibrous rather than bony union is probable. A consideration of a series of radiographs of this form of coxa vara at various ages has shown me: (1) that the displacement of the head does tend to increase with age; (2) that the neck does develop, pointing transversely or even downward; and (3) that the infraction in the upper border of the neck is frequently visible.

The specimen resected by Mr. Robert Jones from a woman, aged 26 years, in whom both hips were affected and whose symptoms dated from birth, shows well the condition finally attained (Royal College of Surgeons museum, Specimens 1785 D and E). The head of the bone is displaced downward, so that only a narrow interval remains between it and the shaft, the neck pointing downward and inward. The lower part of the head, neck, and shaft are continuous, with, however, a fine fibrous intersection between; above this a line of fibrous tissue separates the head and adjacent part of the neck on the inner side from the root of the neck on the outer, a separated area of bone of a different texture, and a space containing fibrous tissue existing here also. (Fig. 4.) The museum catalogue says: "The appearances, therefore, indicate that a solution of continuity has taken place between the neck and the head close behind the latter, that osseous union has followed between the apposed lower portion of the neck and the head (?), and that a formation of callus has occurred upon the upper exposed surface of the neck and occupies the interval between this and the higher part of the head." The specimen already mentioned as existing in the museum of St. Bartholomew's Hospital shows a very similar condition.

Causation.—Such, then, is the pathological anatomy of infantile coxa vara. What factors take a part in its causation? 1. Accident may undoubtedly directly cause the lesion; this is proved by Joachimsthal's case and by the case I have already mentioned, in each of which the symptoms and radiographic appearances were identical with those in non-traumatic cases. 2. Birth injury I have suggested as a possible factor, specially in the production of bilateral cases. It is, however, extremely difficult to prove. 3. Rickets. This deformity is not an ordinary rickety curvature; so much is quite clear. But many of the children in whom it occurs are stated by their parents to have suffered from rickets in infancy, the disease leaving, however, no trace in any other part of the body. Probably the softening of the bone and defective ossification in the first years of life permit the first displacement of the head. Then when all active rickets—indeed, when all evidences of old rickets—have disappeared the mechanical factor of the direction of pressure of the body weight serves to cause steady increase of the deformity of the hip or hips.

Late stages of coxa vara.—Three cases of coxa vara have come under my notice in which the onset of the deformity has occurred during childhood; the clinical condition has resembled a moderate degree of the infantile type, but the radiograph has shown a longer and stronger neck than is usual, with no infraction in its upper border. A specimen of this type of deformity exists in the museum of St. Bartholomew's Hospital; unfortunately it was found in a dissecting-room subject and is without history. (Fig. 5.) These are probably cases of the infantile type of coxa vara in which the displaced head has become united to the shaft by bone and a stout neck has then developed in a more or less horizontal direction. This view is rendered more probable by the occurrence of cases in which it is difficult to say whether the radiograph conforms most nearly to this type or to the infantile type of the deformity.

Rachitic coxa vara.—I turn next to rachitic coxa vara. At the age at which rickets is active—i.e., in the first and second years—the femoral neck is very short, has a wide angle, and is largely cartilaginous. This serves to explain the fact that depression of the femoral neck is not common as the result of infantile rickets. In those rarer cases, however, in which the rachitic processes in the bone continue after infancy (continued, late, or recrudescent rickets) depression of the femoral neck is commonly found when a radiograph is taken. The anatomical condition, however, is a depression of the whole neck, usually with an antero-external convexity in the adjoining part of the femoral shaft, and unaccompanied by any displacement of the epiphysis. The symptoms present are lordosis, a waddling gait, and sometimes limitation of movements of extension, abduction, and inversion of the hip-joint. Save for the lordosis, however, the symptoms are not very evident, and are usually overshadowed by those of other deformities which are present. The fact that this special form of coxa vara is found constantly in these, the very worst cases of rickets, is very strong evidence that infantile and adolescent coxa vara, which have a totally different pathological anatomy, cannot be ascribed to a purely rachitic origin.

ADOLESCENT COXA VARA.

Adolescent coxa vara has its onset, as a rule, between the ages of 13 and 17. It is very rarely bilateral, only twice out of 26 cases in my series, four out of 27 in Whitman's, and eight out of 34 in Hofmeister's, and it is far more common in the male sex. As regards occupation, in Germany many of the sufferers have been field labourers, and in general the deformity seems to occur in those whose work is rough, rather than in those who have to stand long or carry heavy weights.

Clinical history and symptoms.—In many cases the patients come under observation with an indefinite history of the onset of pain and stiffness in the hip of several weeks' or months' duration, the typical deformity being already present and even of considerable degree.

Trauma.—A considerable proportion, however, of patients give an account of some injury to the limb. This may have been severe, giving rise to the deformity immediately, though occasionally without any great pain or disability. In these cases separation of the epiphysis has no doubt occurred and they should be classed under this name or as acute traumatic coxa vara. More commonly there is a slight accident, or often a series of accidents, the patient being perhaps scarcely aware that he has hurt his hip. A few weeks or months later a limp comes on and examination discloses the typical deformity. Owing to the slight nature of the accident and its apparently remote connexion with the subsequent condition it is often forgotten by the patient or only mentioned after much questioning. The following case illustrates this:—

The patient, a male, aged 16 years, was under the care of Mr. D'Arcy Power at St. Bartholomew's Hospital. The following history was obtained. He was occupied in the corn trade (carrying, fairly heavy work). He was well until February, 1906; then he fell over a box and struck his right hip whilst at work; he got up and walked and continued his work; he went to a medical man next day and liniment was ordered. He was well during the summer; he felt no pain and continued his work. In the autumn there was a return of pain and stiffness in the hip; this was getting worse until November, when he stopped work and went to hospital. He could ride a bicycle in the summer but not in the autumn on account of the stiffness. The patient's condition on Dec. 14th, 1906, was as follows. The right lower limb was slightly flexed, everted, and adducted. All movements were almost lost. The great trochanter was displaced upward. The real shortening was three-quarters of an inch; the apparent shortening was greater. A radiograph showed downward displacement of the head of the femur in the neighbourhood of the epiphyseal line.

Period of immobility.—Whether an accident has occurred or not there is nearly always during the progressive stage of the deformity a period during which the movements at the hip-joint are almost or quite abolished. Hofmeister in his first contribution to the subject laid stress upon this stage, but it seems to have been forgotten by many surgeons who, on account of the fixation of the joint, make the diagnosis of tuberculous disease of the hip. The rigidity is due entirely to muscular spasm, it disappears when the joint is examined during anæsthesia, and its presence is easily understood when it is remembered that the lesion in adolescent coxa vara is

close to the epiphyseal line and that this line is entirely intra-articular. During this stage there is also pain in the hip, extending down to the knee, rapid wasting of the muscles of the thigh and buttock, and a fulness in Scarpa's triangle. These symptoms also are like those of tuberculous disease but they are by no means pathognomonic of that disease, they indicate only an intra-articular lesion of the hip joint.

Physical signs.—This period of immobility may last a few weeks or several years, sooner or later movement returns, and the deformity only remains. The limb is now shortened, adducted at the hip-joint, and everted; occasionally it is also a little flexed. The real shortening, measured from the anterior superior iliac spine to the internal malleolus, is seldom more than an inch; the total apparent shortening, measured from the umbilicus to the internal malleolus, is often as much as two and a half or three inches; this and the eversion are usually evident at a glance. The great trochanter is raised to a degree corresponding with the real shortening and is very prominent. Movements at the hip-joint are usually in the later stages free, except abduction and internal rotation, which are limited by anatomical factors. Various other symptoms and signs might be mentioned, such as stiffness after sitting still and crossing of the legs on flexion; they are not essential to diagnosis.

Differential diagnosis.—Accepting separation of the epiphysis as a traumatic variety of adolescent coxa vara, this condition is simulated only by certain cases of tuberculous disease, with adduction at the hip and rotation outward instead of inward. These can only be diagnosed for certain by means of a radiograph, but as a rule there is more fixed flexion and less mobility in the hip-joint after tuberculous disease than in coxa vara. In the radiograph some roughening of the joint surfaces will be evident if tuberculous disease has existed. Adolescent coxa vara with inversion of the foot in my experience does not exist. Probably all such cases will be found on further inquiry to belong properly to the infantile variety.

Before discussing the pathology of adolescent coxa vara I propose to speak of

TRAUMATIC SEPARATION OF THE EPIPHYSIS OF THE HEAD OF THE FEMUR.

Frequency.—This was formerly considered together with fracture of the neck of the femur in children as one of the rarest of accidents. Malgaigne in 1847 could collect only 14 cases of intracapsular fracture before the age of 50 years, and as recently as 1894 Tubby found only 14 cases of separation of the epiphysis; he detailed nine of these and stated that they were, as a rule, the result of severe violence.

During the last ten years, however, injuries to the femoral neck in young people have attracted considerable attention. Poland in 1898 collected 33 cases of epiphyseal separation, some of which illustrated the slight violence which is often a sufficient cause, the small resulting disability and the subsequent onset of a typical coxa vara deformity. Whitman also in recording a number of cases of fracture of the femoral neck in children drew attention to the resulting deformity and its tendency to increase; several resections of the hip-joint for traumatic coxa vara, carried out by Sprengel, Bramann, and Kocher, further demonstrated the existence of a separation of the epiphysis in these cases. In 1903 Hoffa collected in all 87 cases of injury to the femoral neck in childhood, of which he considered all but four to be separations of the epiphysis; he called attention to two facts, that coxa vara is a predisposing factor and that the symptom may be so little disabling that often the diagnosis is not made. Kirmisson in the following year drew special attention to the possibility of this accident arising by very slight violence and particularly by muscular violence; of the latter a number of instances have now been recorded.

Mode of separation.—The pendulum has then swung completely over; instead of being very rare and the result of great violence, it has been demonstrated that this accident is not uncommon and that a slight injury is all that is necessary, muscular action being sufficient. Some of the instances recorded are very striking. Kirmisson relates the story of a girl, aged 13 years, who separated this epiphysis whilst dancing, without any fall; although suffering great pain she was able to walk on the third day after the accident, the nature of which was only diagnosed after she had got about for four days more; the deformity was then that of coxa vara with eversion.

Many similar cases could be selected from the literature; in all the cases which have come within my experience the violence has been slight, and in several there has been more than one accident. The following case presented features of great interest.

The patient, a male, aged 17 years, was under the care of Mr. Jones. The history was as follows. He was well until three years before. Then during a hurdle race he felt that he strained his left hip. This he repeated subsequently. On each occasion he was able to finish the race, which he won, and after each occasion he felt some pain and stiffness in the hip for a few days. Five months before coming to be seen he strained his hip again, and after this limped and had pain continually. When seen the left limb was flexed 10°, adducted, and rotated out. The thigh was wasted. The great trochanter was raised three-quarters of an inch above Nélaton's line. The real shortening from the anterior superior spine to the inner malleolus was three-quarters of an inch; the apparent shortening from the umbilicus to the inner malleolus was two inches. As regards movements, abduction and internal rotation were limited; the others were free. A radiograph showed that the epiphysis of the head of the femur had slipped downward so that it overlapped the lower border of the neck. The upper border of the neck had become rounded but showed a small sharp prominence from its centre; this probably was the remainder of the sharp upwardly projecting point seen in radiographs of acute traumatic cases.

Symptoms and resulting deformity.—It is a very remarkable fact that this severe injury in a majority of cases gives rise to comparatively trivial symptoms. Many of the patients are able to get up and walk away after the mishap and some are even unaware that they have injured the hip at all until several days or even weeks later. This comparative immunity from severe symptoms is no doubt the reason for the non-recognition of the injury until recent years and even now many cases go unrecognised on this account.

It is an acknowledged rarity for a case to be seen and diagnosed within a few days after the accident; in the few cases which have been reported the signs have generally been the presence of a deformity consisting of adduction, slight flexion, and eversion at the hip-joint, with a little shortening of the limb—that is, the deformity of coxa vara of slight degree. In some cases there has at first been abduction, the position then simulating that of an anterior dislocation. Directly the weight is borne on the limb, however, this becomes converted into an adduction deformity. When seen some months after the accident there is in every case the deformity of the ordinary variety of coxa vara. Not only are the symptoms typical but after a sufficient interval the radiographic appearances and the anatomy of the resected specimens are indistinguishable in the two conditions, and even the microscopic changes in the mode of growth of the cartilage and in the disorder of ossification are similar.

The following conclusions may be arrived at concerning traumatic separation of this epiphysis: 1. It is much more common than was formerly believed, especially in adolescence. 2. It is produced often by very slight violence and sometimes by several separate accidents. 3. The immediate symptoms are often of no great severity, consequently the condition frequently remains undiagnosed. 4. The resulting deformity is indistinguishable clinically or pathologically from ordinary adolescent coxa vara.

THE PATHOLOGY OF ADOLESCENT COXA VARA.

The pathological anatomy of adolescent coxa vara can be studied in resected specimens of the head of the femur and by means of radiographs. Apart from traumatic cases there are no records in England of resected cases. My observations have, therefore, been by means of radiographs; they are confirmed, however, by a consideration of the descriptions of specimens resected in Germany.

Radiography of the hip.—In interpreting radiographs of the hip certain points must be attended to. In addition to its inclination to the axis of the shaft of about 125° the femoral neck is directed forward when considered in relation to the transverse axis of the lower extremity. This angle of torsion is, according to Mikulicz, very variable, being as a rule, however, between 5° and 20°. In coxa vara, owing to the posterior displacement of the head, this angle is diminished or rendered opposite in sign. The shadow thrown by the upper end of the femur varies according to the direction in which the neck is pointing, and owing to this torsion the true angle between the neck and the shaft is shown when

the limb is a little inverted," the degree of inversion required being just sufficient also completely to hide the lesser trochanter behind the shaft. In this position, in addition, the head of the femur and the great trochanter are at equal distances from the photographic plate and thus maintain their relative dimensions in the picture.

Radiographs of a young normal femur and of a museum specimen of coxa vara showed the following important alterations in the appearances as the femur was rotated outwards: 1. The head of the bone casts a relatively larger shadow owing to its increasing distance from the plate. 2. The lower border of the femoral neck becomes apparently shortened and its point of origin from the shaft raised. 3. The upper border of the femoral neck at first becomes clearer, but with further eversion is entirely obscured by the shadows of the head and of the great trochanter. Owing to these alterations it is necessary when looking at a radiograph of a hip-joint to consider carefully the position in which it was taken. It is generally possible to form some judgment of this from the appearance of the shadow, especially from the outline of the trochanters, but it is advisable to make a note of the direction in which the foot points when any radiograph of the hip is taken. The condition present is often rendered clearer by exposing plates in two or more positions. In nearly all cases the radiograph in adolescent coxa vara has to be taken with the foot everted.

Radiographs of coxa vara.—In the acute traumatic coxa vara a definite downward displacement of the epiphysis of the femoral head is seen, the upper part of the fractured end of the neck appearing above as a prominence. In cases following at an interval after an accident, after several slight accidents or without any accident, the appearances are almost identical and are these. The head of the femur is displaced downwards, so that the lower part of its joint surface no longer lies in the acetabulum. In spite of the fact that most of the radiographs are taken with the limb everted, the head does not appear unnaturally large; this indicates, as previously explained, that it is displaced posteriorly. The epiphyseal line is, as a rule, clearly seen. It appears unnaturally long in some of the radiographs; this is probably due to the fact that the head is not seen from its true anterior aspect. Thus, considering the epiphysis as a cup-shaped disc with the concave side towards the neck, the view includes a part of this concave surface. The femoral neck in most cases shows two parts; the part next the shaft has its natural direction, at any rate as regards its lower border; the upper border, though springing naturally from the trochanteric region, being rounded off above. The part of the neck near the head, however, slopes downward and inward to join it; the lower border here takes, as a rule, a sharp curve downward like a hook and below the head overhangs it "like a mushroom." The upper border of this part forms a continuous upward convexity, internally continuous with the surface which faces the epiphyseal line; it shows, however, in many radiographs a prominence varying in size and situated nearly opposite the upper margin of the acetabulum. This doubtless is the spot to which the outer extremity of the epiphysis was attached.

These radiographic appearances are sufficient to establish the seat of the lesion in adolescent coxa vara as being in the neck close to the epiphyseal line. This, though put forward by Sprengel and later by Schlesinger, does not seem to have been generally accepted; thus, Whitman states that only one-fourth of the adolescent cases in his series were epiphyseal in nature. (Fig. 6.) With a stricter differentiation of the cases of this deformity into their respective classes and better radiographic methods there is no doubt, however, that this slipping of the epiphysis will be found to be the anatomical condition in all adolescent cases; indeed, in the absence of any process of softening of the bone already formed, the only point in the femoral neck at which deformity can be conceived as being gradually but rapidly produced is in the region of the new bone near the epiphyseal line. A consideration of the descriptions of resected specimens, both traumatic and non-traumatic, renders support to this view of the pathological anatomy.

The microscopic changes described by different observers have been various; they can be reduced to the following:—1. Irregularity in growth of the epiphyseal cartilage with irregular ossification; this leads to the production of columns of cartilage cells which contain several cells in a capsule and occasionally to the inclusion of cartilage islands in the bone. 2. Absorption of bone in places and formation of new bone in others; these are probably secondary changes adapting the bone to the new pressure conditions. The irregular ossification is similar to, but never as extreme as, that in rickets, but its significance in this respect is destroyed by the fact that exactly similar alterations were found by Cornil and Coudray after traumatic separation of an epiphysis in rabbits. In fact, all the alterations may be explained as resulting from injury, the injury being, perhaps, not any actual accident but rather consisting in the altered pressure conditions to which the epiphysial region is being subjected. The observed changes may, in other words, be entirely the result and in no sense the cause of the deformity.

Theories of causation.—For Kocher's theory that osteomalacia is the cause of adolescent coxa vara there is no evidence; there is a true local osteomalacia which is usually the result of an accident but it presents distinctive microscopic and radiographic characters. The theory that late rickets is the cause of the condition has even less in its favour. Coxa vara is very seldom accompanied by the other adolescent deformities, scoliosis, genu valgum, and flat foot, and nothing resembling the changes at the epiphysial lines typical of rickets has ever been demonstrated. Whitman ascribed the deformity to an excess of the normal process of depression of the neck which takes place during growth. This is, of course, disposed of by the fact that the deformity occurs close to the epiphyseal line. Sprengel in 1898 was the first to call attention to the importance of traumatism in the etiology of adolescent coxa vara. Since then several authors have collected materials on the subject, notably Rammstedt and Schlesinger, who have ascribed the deformity to a gradual and continuous slipping (*Continuitätstrennung*) of the epiphysis. All the anatomical and radiographic evidence which I have been able to collect serves to corroborate this view, which may now, I believe, be accepted as established on a firm anatomical foundation. The only question which remains for decision is the proportionate importance to be ascribed to (1) injury and (2) a process of imperfect bone formation at the epiphyseal line as factors in the origination of the process.

FIG. 6

Adolescent coxa vara (after Schlesinger). From a patient in whom the deformity came on gradually after an injury.

Now that we are aware how slight are the accidents that will cause immediate or gradual separation of the epiphysis and how trivial the resulting symptoms often are it is easy to imagine that many of these incidents, occurring perhaps six or eight months before the onset of a coxa vara deformity, have passed completely from the memory of the patient, or are related only after very careful questioning. The occurrence of coxa vara, moreover, largely among

patients of a working class, whose work is rough and who are liable to many slight injuries of which they take little notice, is further in favour of the great importance of the traumatic factor. Whilst, therefore, it is certain that there is a great difference in the ease with which this slipping of the epiphysis occurs in different individuals, I believe that more and more importance will have in the future to be assigned to these slight accidents in the production of coxa vara. An evident corollary from this is that much greater care in the examination and treatment of these slight injuries than usually taken is necessary, the diagnosis by means of a radiograph of the existence of a juxta epiphyseal sprain or of a partial diastasis ought to save the patient from a subsequent severe deformity.

In the natural hip the epiphysis of the head of the femur points nearly vertically upward and pressure downward of the body weight through the upper part of the acetabulum tends to press the head against the neck of the bone, but puts no cross strain on the epiphyseal line. Directly, however, the epiphysis has been but very little displaced the upper margin of the acetabulum comes to press directly on the junction of the head and neck and the whole of the body weight then acts through this margin against the epiphyseal region, tending to shave off the head of the bone. This mechanical factor is of the greatest importance in increasing the deformity and continues in force until union of the epiphysis has occurred; it is essential to bear it in mind in treating patients with coxa vara.

Coxa vara in osteo arthritis.—Slight flexion, adduction, and eversion at the hip-joint with a little real shortening of the limb occasionally occur in osteo-arthritis. This is the result partly of wearing away of the upper part of the femoral head with deposit of new bone below, an apparent depression of the neck being thus produced, and partly of enlargement of the acetabulum. This condition has been classed with coxa vara; it has, however, no relation to the infantile, adolescent, or rachitic forms of this deformity and is much better kept quite apart from them. Just, however, as any deformed joint is more liable to the development in it of osteo-arthritis later in life, so we find that osteo-arthritis may supervene upon coxa vara. Several instances of this, especially in traumatic cases, have been placed upon record.

Coxa vara after inflammatory disease.—It is not at all uncommon to find a case of old tuberculous disease of the hip-joint simulating coxa vara clinically. Such cases can usually be distinguished by the greater limitation of movement and by the presence of scars; no case of coxa vara (infantile, adolescent, or rachitic) has ever been known to suppurate. But in the radiograph these tuberculous cases show destruction of the head of the femur or acetabulum, often with production of new bone around, a condition which should not be classed as a coxa vara deformity. In no case up to the present has depression of the femoral neck as the result of tuberculous disease been demonstrated. The results of epiphysitis of the hip have been studied by Honsel. He found that depression of the femoral neck does occur as a sequela, and this might be expected when the great injury likely to be done to the epiphysis is remembered. In my experience, indeed, this result is not rare, but being usually overshadowed by the presence of dorsal dislocation or of ankylosis it is liable to be overlooked and, indeed, is not of any practical importance.

THE TREATMENT OF COXA VARA.

Great difficulties arise in discussing the treatment of coxa vara. Hitherto this has been in the hands of a very few surgeons, who express great pleasure with their results but who have not published any full account of these, and in particular have not shown by photographs or radiographs the functional or anatomical condition in the hip-joint after the conclusion of their treatment. Remembering the pathological anatomy of the affection, three different aspects of treatment have to be considered: (1) preventive treatment; (2) treatment during progress of the deformity; and (3) treatment aiming at correction of the deformity.

The first two of these have been to a great extent neglected, whereas now that the condition is becoming more widely known and is recognised earlier they are of much more importance than the correction of the deformity, which is probably only necessary in severe cases. Under preventive treatment I include the much more careful examination of all hip injuries both in childhood and in adolescence, with the use of radiography in all doubtful cases, for the ordinary signs of injury to the femoral neck (shortening, eversion, and crepitus) are very apt to fail us in these cases. Such injuries when discovered must be treated with the hip well abducted and can only be effectually held in this position on some such splint as the double Thomas extension frame, as modified and used by Mr. Jones.

During the stage of progress of the deformity the first necessity is to secure abduction; under an anæsthetic this is usually sufficiently free except in cases of old standing. The limb should then be fixed upon an extension frame in the abducted position for a sufficient time for consolidation to occur (from six weeks to two months). It must be remembered, however, that when a slight degree even of coxa vara of the infantile or adolescent type exists the weight of the body through the acetabulum is keeping up a continuous cross strain upon the new bone formed at the epiphysial line. On this account every case of coxa vara should be given for a considerable period a Thomas calliper splint, so that the weight may be taken direct from the pelvis to the ground. The period for which this must be worn cannot be stated with certainty until we have much more complete records of the progress of cases. Six months, I think, should be the minimum and if it is worn until growth is completed the result will be so much the better.

Correction of the deformity aims at overcoming the abduction and eversion. Of the various operative measures adopted, transtrochanteric osteotomy, with the removal of a wedge with its base antero-external in severe cases, gives the best results. It has been, in fact, a most satisfactory operation. But it cannot be too strongly emphasised that if the hip-joint is protected during the time when the deformity tends to progress, a very great natural improvement takes place in all cases of adolescent coxa vara, and it is a mistake to rush in and perform an osteotomy too soon.

Excision of the hip is never required in adolescent coxa vara; even if absolute immobility were to persist such a fixed hip is better and stronger than it would ever be after an excision. Cases of infantile coxa vara, as a rule, come under notice in such an advanced stage of deformity that it is difficult to suggest a treatment. A year ago I advocated on anatomical grounds an excision with the removal of as little as possible of the head of the bone in these cases. So far as I know this has not been tried, both Jones and Hoffa, who resected the hip for this condition, having removed the whole head, neck, and trochanteric region. During the last six months, however, I have had the opportunity of seeing a number of cases of old hip disease in which excision has been carried out. I can unhesitatingly say that the functional result was in every case bad, and I am now inclined to think that, except in extreme cases, the patient with infantile coxa vara is better off with his hip-joint as it is than after an excision.

I feel, gentlemen, that I have hurried over the treatment of this deformity and spent perhaps a disproportionately long time at the pathology. But it is only by gaining a clear insight into the pathological anatomy that I have been able to arrive at the general principles which should guide us in our treatment. Neither I nor anyone else, I believe, has seen a sufficient number of these cases to be able to lay down the law by a consideration of our results. But I have been able to watch for the last two or three years a sufficient number of adolescent cases, treated by a calliper splint only or untreated, to impress upon me the very great improvement that takes place naturally and the necessity for hesitating before we adopt any drastic treatment.

In conclusion, I must offer my thanks to the many surgeons who have placed at my disposal the clinical material which they possessed bearing upon this subject. The elucidation of the pathology of uncommon conditions is bound to be a matter of difficulty; it is only rendered possible by the kindness of the profession at large in permitting the collection of material by one observer from many sources.

DEVON AND CORNWALL EAR AND THROAT HOSPITAL.—The twentieth annual meeting of the subscribers to the Devon and Cornwall Ear and Throat Hospital, Plymouth, was held on Feb. 5th under the presidency of the Mayor. The medical report stated that during 1906 there had been 987 patients treated compared with 859 in 1905, and that 23 in-patients had been admitted against 12 in the previous year. The financial statement showed a favourable balance of £42.

SOME AFFECTIONS OF THE PANCREAS.[1]

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THE subject of diseases of the pancreas has been so ably and so fully treated by Mr. A. W. Mayo Robson in his interesting Hunterian Lectures in 1904 that anything I can add can be little more than supplementary or illustrative of his observations. But a series of cases of pancreatic disease which have come under my observation may afford points of interest to the society. Abstracts are annexed of the notes of these cases, the nature of all of which was verified by operation or necropsy. The pancreas is subject to the same pathological conditions as affect other organs of the body. In this paper I shall deal only with carcinoma and with some forms of inflammation of the pancreas.

Carcinoma of the pancreas scarcely figured in the text-books at all till recently, the reason being, I think, that the secondary nodules which form in the liver during the course of most cases of cancer of the pancreas are so much more readily recognisable both during life and at post-mortem examination than a nodule of cancer in the pancreas which requires to be searched for, that many cases of cancer of the pancreas have been considered as examples of cancer of the liver. This is borne out by the fact that since more attention has been directed to diseases of the pancreas, while the deaths certified from cancer of the organ have risen, the deaths certified as from cancer of the liver have fallen in number. Thus the deaths certified to the Registrar-General from cancer of the pancreas increased year by year from 281 in 1899 to 436 in 1904, the most marked rise being from 340 in 1903 to 436 in 1904, while in the same 12 months the deaths registered from cancer of the liver and bile-ducts fell from 3901 to 3736. No doubt many cases of cancer of the pancreas still escape registration as such.

Morbid anatomy.—The usual form of growth is scirrhus but sometimes is a columnar epithelioma; the disease usually affects the head of the gland. Writers differ as to the relative frequency of primary and secondary cancer of the pancreas; only cases of primary disease are included in Table II. Before it has run its full course secondary deposits usually occur, most commonly in the liver, but may be in the gall-bladder, or ducts, or elsewhere. Mr. Robson finds adhesions to be uncommon in cancer of the pancreas but in several of my cases they were present, and in most, I think, of the cases recorded in which attempts were made to remove the organ.

Etiology.—Like other cancers it is most frequent after middle life but in one of my cases the age was only 32 years.

Sex.—It is generally agreed that it affects the male sex most. Hale White gives the proportion as 3 to 1 and Oser as 2 to 1, but the Registrar-General's death returns for six years show only a predominance of 918 males to 834 females. Of my cases there were 11 males and nine females.

Little is known as to its *exciting causes*. Fitz[2] writes: "Unlike cancer of the gall-bladder it is rarely associated with calculi," and Mr. Robson observes also that when calculi are found at operation with an enlargement of the pancreas it is most commonly fibroid enlargement. But in five of my 20 cases calculi were found post mortem in the gall-bladder and there was a history of calculi in a sixth, and I cannot but think that calculi in the biliary passages predispose to cancer of the pancreas—an additional reason for their removal by operation, even when not causing urgent symptoms.

Symptoms.—Minkowski showed that the pancreas may be removed from dogs (so long as a small portion remains to prevent diabetes) without producing any important symptoms. Similarly the pancreas may be almost destroyed by cancer without any symptoms resulting, as in Case 19 in Table II.—a man admitted into St. Mary's Hospital in 1897 with signs of mediastinal tumour; he died six months later, the necropsy showing that this tumour was secondary to a primary growth in the pancreas which had almost entirely destroyed it. This man, owing to a remarkable distension and varicosity of the veins of the abdominal wall and chest, had been seen by many physicians but had no symptoms to attract attention to the pancreas. And Franke[3] extirpated the whole (or nearly the whole) of a cancerous pancreas, the patient living for five months afterwards with only temporary glycosuria and with no alteration in the fæces. It is in agreement with these observations that we find cancer of the pancreas produces, as a rule, no symptoms unless it involves the *head* of the gland, when the symptoms which arise are due to pressure upon adjacent organs. Mr. Robson thus describes the symptoms of cancer of the pancreas: "For a time indefinite symptoms of digestive disturbance, then jaundice appears coming on gradually but persistently increasing; the gall-bladder is usually distended and the liver is normal or only slightly enlarged. A tumour may be felt in the neighbourhood of the pancreas. Cachexia rapidly develops, and in some cases pain disturbs the patient's rest: there is soon a feeling of intense prostration and weakness; the fæces are massive and contain an undue proportion of fat and of undigested muscular fibre; the urine contains albumen frequently, and sugar and fat rarely." The most noticeable of these symptoms is the *jaundice* which soon becomes intense, the dark olive-green colour sometimes described as characteristic of malignant disease of the liver, being more significant of pancreatic disease, though not necessarily of malignant nature.

The *fæces* in consequence of obstruction to the flow of bile become, as it is sometimes termed, "clay-coloured"; like pipe-clay or putty, or colourless more accurately describes them. But in two of my cases they were of a drab or slate colour, though no drug was being taken and they contained no blood. Stress has been laid upon the complete absence of bile from the fæces in cancer of the pancreas, but I think if the case is seen early bile may be found in the fæces for some little time after the onset of jaundice; this was so in several of my cases. Having once disappeared from the fæces, however, bile rarely reappears, though in Case 9 (Table II.) it did so towards the end of the disease after a long absence, the growth having ulcerated through the bile-duct and wall of the duodenum.

The massive character of the stools and their contained fat are very constant features of pancreatic cancer. Müller showed, however, that steatorrhœa may occur without pancreatic disease, and Fitz[4] says "it is to be regarded as evidence of disease of the pancreas only when other causes of its presence can be excluded, the most important of which is interference with the flow of bile into the intestine." The fæces in most of my cases, but not in all, were found to contain fat; undigested muscle fibre was usually found, but often the patient's milk diet prevented this.

Enlargement and distension of the gall-bladder occur as a result of obstruction in the bile-duct; in several cases after a time this distension seemed to increase very suddenly, with deepening of the jaundice and increased feeling of illness.

Pain has been described as severe, even agonising, in half the cases, but my cases confirm Mr. Robson's statement "that pain and tenderness are, as a rule, absent in malignant disease of the head of the pancreas, though larger growths are often marked by extreme agony." Pain was noted in eight of my cases, but in five of these there were also biliary calculi as well as cancer of the pancreas, and in a sixth a history of calculi; in another case the growth had involved the pylorus and in another the vertebræ. In no case in which the disease was limited to the pancreas was there pain, and when pain is present gall-stones or cancer of the gall-bladder or ducts is to be suspected.

Hæmatemesis sometimes, and *melæna* more often, occur, ascribable in part to the jaundice but still more, according to Robson, to the tendency to hæmorrhage which arises from diseases of the pancreas. The hæmorrhage may be profuse, as in Case 16, of a powerfully built man, aged 45 years, who died in hospital from uncontrollable hæmatemesis after an illness of only two months' duration, the post-mortem examination showing a soft growth in the head of the pancreas and an enormous quantity of blood in the stomach without any ulcer or lesion of the mucous membrane. In Case 9 melæna occurred from ulceration of the growth into the interior of the duodenum.

Diabetes.—Miraillé found temporary glycosuria in the early stage of many cases of cancer of the pancreas but persistent diabetes, it is generally agreed, is very uncommon in the disease.

Thirst, however, very like that of diabetes was very noticeable in three of my cases.

Œdema of the feet may occur from pressure upon the

[1] A paper read before the Medical Society of London on Jan. 14th, 1907.
[2] Clifford Allbutt: System of Medicine, vol. iv., p. 276.
[3] Archiv für Klinische Chirurgie, 1901.
[4] Transactions of the Association of American Physicians and Surgeons, 1904, p. 43.

vena cava; it was present in four of my cases. *Ascites* is sometimes said to arise from pressure upon the portal vein, but the pancreas does not so readily press upon the portal vein as on the vena cava, and I have not seen ascites result from cancer of the pancreas unless there was also cancer in the liver or elsewhere. In only two cases in the table was there ascites—in Case 7, in which cancer of the liver and gall-stones were also found; and in Case 20, in which cancer of the gall-bladder and gall-stones existed. And I think that when ascites is present as well as jaundice there is reason to suspect more than cancer of the head of the pancreas.

Enlargement of the spleen, considerable in amount, was present in two of my cases. Mr. Robson found it also in some cases of pancreatitis.

Pyrexia.—Bard and Pic assert that the temperature is normal or subnormal, but where there is peri-pancreatitis there may be persistent pyrexia.

Tumour is rarely to be felt in the early stages and a very small growth—in Case 9 (Table II.) no larger than a bean—may produce serious jaundice. The enlargement of the gall-bladder usually present adds to the difficulty in detecting tumours of the pancreas.

Administration of salol in 30-grain doses daily is claimed to assist in the diagnosis of pancreatic disease. Where pancreatic secretion is absent, the salol not being broken up in the intestine into salicin and phenol, carbolic acid does not appear in the urine. Much less than 30 grains of salol have rapidly produced carboluria in the cases in which I have tried it, and I believe the test to be valueless and sometimes injurious.

Sahli's test.—The administration of glutoids of iodoform hardened in formalin I have several times tried, but the results have been indefinite.

Oxalate of lime crystals have been very constantly present in the urine in nearly all my cases.

II.—CHRONIC INTERSTITIAL PANCREATITIS.

Chronic interstitial pancreatitis is divided by Robson into (*a*) interstitial (intralobular and intra-acinar), and (*b*) cirrhosis.

Etiology.—It arises in many cases from catarrh of the biliary ducts originating in cholelithiasis and extending into the ducts of the pancreas. It may also occur in association with pancreatic calculi, multitudes of small concretions as in Case A (Table I.) or a larger calculus as in Case B (Table I.). The catarrh may be set up by other causes, one of which is said to be typhoid fever. Cases also occur without any evidence of previous catarrh of the ducts, as in some of the atrophic forms of pancreatitis with diabetes, and as Stockton [5] remarks, "the disease is not always ascribable to infection and is sometimes more of the nature of cirrhosis of the liver with which it is sometimes associated." It may arise from syphilis, congenital, as in the cases recorded by Birch Hirschfeld [6] and by Schlesinger,[7] or acquired, as in the case reported by Moxon of a gumma in the kidney and a softening syphiloma in the pancreas, and in cases reported by H. B. Robinson [8] and by Moynihan. There was a history of syphilis in one of my cases and a strong suspicion of it in another. In some cases interstitial pancreatitis follows on an attack of acute catarrhal pancreatitis. In many cases the disease is as unaccountable as is fibroid disease occurring in other organs—the liver, kidney, nervous system, &c. Case A (Table I.) afforded conclusive evidence that the hypertrophic form may go on to atrophy, the former condition being found at operation and the latter post mortem a few months later.

Symptoms.—As in the case of cancer, symptoms are most prominent when the head of the organ is affected. They are then so similar to those of cancer of the head of the gland that they need not be repeated here. The points of distinction between the two will be discussed later. When interstitial pancreatitis affects the body only of the gland jaundice will not be present, and probably the disease may exist without possibility of recognition. But a tumour may arise in the region of the body of the pancreas or possibly diabetes. Diabetes, however, is of pancreatic origin in the minority of cases. Fatty stools are more significant of pancreatic disease in the absence of jaundice than when jaundice is present, and I imagine that with glycosuria they may be taken as indicating pancreatic disease. Case A (Table I.) was interesting as affording an example of diabetes with fatty stools in which operation had shown the existence of interstitial pancreatitis.

Course of chronic pancreatitis.—Though the symptoms of the fibroid disease and of cancer of the pancreas are similar, the course of the diseases may be very different. Fibrosis, unlike cancer, may commence in an acute attack with pyrexia and other symptoms of "catarrhal jaundice," these symptoms soon subsiding except the jaundice, which persists with gradual fibroid change in the pancreas. In less common cases the acute symptoms clear up but not the jaundice, the chronic fibroid change in the pancreas, nevertheless, developing. Whether commencing acutely or gradually there is ultimately the danger as in cancer of biliary toxæmia, though I think the obstruction in the bile duct takes longer to become complete than in cancer cases. In cancer, even if the dangers of biliary toxæmia be averted, death soon occurs. But in fibroid disease drainage of the gall-bladder may be followed by recovery with or without subsidence of the enlargement of the pancreas. This result has even followed mere manipulation of the gland and in such cases possibly it would have occurred without operation. Operation, however, sometimes becomes compulsory when the jaundice is intense. Pancreatitis, though it may thus be recovered from, has dangers which cancer has not. In some cases the fibroid pancreas becomes the seat of hæmorrhage or abscess formation. In other cases, especially in the intra-acinar form, a rapidly fatal form of diabetes comes on. Examples of these various results are afforded by the tabulated cases. Case E (Table I.) exemplifies the gradual onset of the disease, jaundice coming on insidiously and deepening till dangerous toxæmia was averted by operation; the patient quite recovered. In Case D (Table I.) the onset was more acute with symptoms such are usually described as those of "catarrhal jaundice" as which it was regarded. These symptoms cleared up, except the jaundice, which became deep with threatening symptoms. I saw the patient twice with his medical attendant and after consultation with Mr. G. H. Makins cholecystenterostomy was performed nine weeks after the onset of jaundice by Mr. C. S. Wallace. This was seven months ago; the jaundice has entirely disappeared but the patient fails to gain weight and still passes enormously long formed motions almost white in colour. It seems probable that diabetes will ensue. In Case F (Table I.) the onset was so acute with abdominal pain, &c., that the symptoms were attributed to food poisoning. The jaundice intensified after the subsidence of the acute symptoms and fat appeared in the fæces. Operation by Mr. Robson two months later showed a fibroid enlargement of the head of the pancreas. The patient recovered and lived some time. In this case bile persisted in the fæces for nearly two months and with the acute onset suggested obstruction by gall-stones. Case C (Table I.) commenced with symptoms indistinguishable from those of "catarrhal jaundice," passing off in three to four weeks, and in this case the jaundice also passed off, though I thought as it did so I could detect a swelling about the head of the pancreas and there was fat in the stools. The patient was quite well after this for three years, but early in this year he returned to hospital with a recurrence of the jaundice. A few days later he had a rigor with a rise of temperature to 105° F. and with intense pain and very shortly afterwards the specific gravity of the urine suddenly rose to 1040 with 11 per cent. of sugar. The patient had previously refused operation, but now consented, and to avert the danger of jaundice Mr. W. H Clayton-Greene inserted a drainage-tube into the gall-bladder, but the patient soon after died from diabetic coma. The necropsy showed a much enlarged fibroid head of the pancreas, in its substance there were a small recent hæmorrhage and a localised abscess. Apparently this patient's fibroid disease commenced in the acute attack three years previously. In Case A (Table I.)[9] jaundice came on gradually, found on opening the abdomen three months later to be due to fibroid enlargement of the head of the pancreas; the wound was closed and the jaundice gradually disappeared, to be replaced by diabetes, ending in fatal coma six months later; the necropsy showed that the much enlarged pancreas found at the operation had become atrophic. Case B (Table I.) was an example of chronic interstitial pancreatitis in association with a pancreatic calculus of the size of a bean in the duct of Wirsung, which operation failed to discover. An interesting

[5] Transactions of the American Physicians and Surgeons, 1904, p. 98.
[6] Archiv der Heilkunde, 1875, p. 174.
[7] Virchow's Archiv, 1898, p. 99.
[8] Brit. Med. Jour., 1900, p. 1004.
[9] Transactions of the Clinical Society, vol. xxxvi., p. 96.

TABLE I.—CASES OF CHRONIC INTERSTITIAL PANCREATITIS.

Case.	Sex and age.	Date	History of case.	Hæmorrhage.	Tumour.	Œdema of feet.	Urine.	Remarks.	Result.	Post mortem.
A	F., 20.	1902	Discomfort in pancreas region; jaundice 15 months later; operation four months later showed great enlargement of head of pancreas; gradual subsidence of jaundice; supervention of diabetes three months later with steator rhœa. Jaundice temporary; pain slight; vomiting *nil*.	Melæna two or three times.	*Nil.*	*Nil.*	Sugar six months before death.	Reported in the Transactions of the Clinical Society of London, vol. xxxvii.	Death from diabetic coma in 23 months.	Pancreas much atrophied and fibrous, with scores of small calculi.
B	M., 53.	1903	Epigastric pain gradually increasing; attack of acute colic, preceded by two days by jaundice; fæces colourless; two months later pyrexia, reaching 105°F.; operation failed to find gall-stones. Jaundice deep; pain severe; vomiting once.	*Nil.*	*Nil.*	*Nil.*	No sugar.	Acute attack, with rigor and pyrexia resembling biliary colic caused by pancreatic calculus.	Death after operation.	Much enlarged fibrous pancreas, with a calculus in Wirsung's duct, of size of a bean; adhesions around gall-bladder, but no gall-stones.
C	M., 52.	1903	Acute bilious attack and jaundice lasting four weeks, apparently catarrhal jaundice; swelling of pancreas felt as symptoms subsided; three years later jaundice recurred and pancreatic tumour felt, with colourless fæces; after ten days' severe pain, rigor, 6 per cent. of sugar in urine, and much thirst, also hæmatemesis; refused operation at first, but eventually cholecystotomy performed. Jaundice deep; pain severe; vomiting once.	*Nil.*	Felt.	*Nil.*	Sugar towards the end.	Apparently began three years previously in attack like catarrhal jaundice.	Death from diabetic coma.	Fibrosis of pancreas, with great enlargement of its head, centre of which was seat of small hæmorrhage and fresh abscess.
D	M., 60.	1905	Chills, slight pyrexia, followed in a few days by jaundice; bile disappeared from stools and jaundice became intense; acute symptoms subsided in four weeks but jaundice persisted; cholecystduodenostomy performed nine weeks after onset, fibrous nodule of the size of a walnut being felt in head of pancreas. Jaundice intense; pain little; vomiting *nil*.	*Nil.*	?	*Nil.*	No sugar.	Apparently acute pancreatitis, passing into chronic.	Now seven months since operation; no jaundice but does not gain weight and fæces still colourless.	—
E	M., 40.	1903	Shivers and chills with occasional vomiting, soon followed by jaundice, which gradually deepened; some bile persisted in fæces for three months after jaundice began; steatorrhœa; gall-bladder became suddenly very tense and jaundice deeper, with loss of weight; five months after jaundice came on, cholecystotomy, enlarged pancreas being felt at operation; cholecystduodenostomy two months later; complete recovery, and performed active duties as constable for three years, with two attacks of transient jaundice; attack of pleurisy and recurrence of jaundice with hectic fever and death. Jaundice intense; pain *nil*; vomiting occasional.	*Nil.*	*Nil.*	*Nil.*	No sugar.	—	Death from pyæmia two and a half years after operation.	Gall-bladder enlarged and full of bile, but with free opening into intestine; suppurative pylephlebitis.
F	M., 60.	1904	Very sudden onset of vomiting and epigastric pain ascribed to food poisoning; jaundice two days later, gradually deepening, but bile persisted in fæces for eight or nine weeks; fat in fæces; gall-bladder eventually very tense; cholecystotomy ten weeks after onset of illness, a hard mass being felt in pancreas; jaundice passed off; six weeks later gall-bladder sutured to colon; recovery, with troublesome diarrhœa from entry of bile into colon; subsequently pyrexia and death from abscesses in liver. Jaundice intense; pain *nil*; vomiting *nil*.	?	*Nil.*	*Nil.*	No sugar.	—	Death from pyæmia 18 months after operation.	Pancreatic swelling, seen at operation, shrunken; gall-bladder large, full of bile; plastic adhesions between colon and abdominal wall; about a score of small abscesses in liver.

TABLE II.—CASES OF CARCINOMA OF PANCREAS.

Case.	Sex and age.	Date.	History of case.	Hæmorrhage.	Tumour.	Liver and gall-bladder.	Œdema of feet.	Remarks.	Result.	Post mortem.	Secondary deposits, &c.
1	M., 58.	1892	Epigastric pain; jaundice; frequent chills; persistent pain; constipation; stools eventually colourless, but contained bile at first. Jaundice intense; pain severe; vomiting *nil*.	Late hæmatemesis.	*Nil.*	—	*Nil.*	—	Death in 11 weeks after onset from hæmatemesis.	Cancerous tumour, of size of orange, in head of pancreas.	Liver: small omentum.
2	M., 52.	1897	Epigastric pain severe after food; then jaundice; stools at first alternately light and dark coloured. Jaundice intense; pain severe; vomiting *nil*.	*Nil.*	Tender epigastric tumour.	—	*Nil.*	Dysphagia.	Death, 15 months.	Pancreas infiltrated with cancer nodules in head and body.	Liver, lungs, and subcutaneous nodules; much matting of peritoneum around pancreas.
3	F., 59.	1900	First symptom, gradual jaundice; bowels relaxed, fæces colourless; operation showed gall-bladder full of dark green bile. Jaundice intense.	Melæna early.	Felt after ten months.	Liver much enlarged.	—	Much thirst.	Death, 12 months.	Tumour, of size of walnut, in head of pancreas.	Liver.
1	2	3	4	5	6	7	8	9	10	11	12

1	2	3	4	5	6	7	8	9	10	11	12
4	F., 53.	1899	History of biliary colic four years previously; indigestion, deep jaundice soon after. Pain severe; vomiting late in disease.	—	Towards end.	—	—	—	Death, 11 months.	Cancerous mass in head of pancreas, glued to spinal column.	Liver; cervical glands.
5	M., 54.	1899	Onset with shivers and vomiting, gradual jaundice; fæces colourless; growth in pancreas; not detectable at operation. Jaundice deep; vomiting slight.	Melæna after two months.	*Nil.*	Liver large.	—	—	Death.	Very small nodule in head of pancreas, obstructing bile duct, not detectable at operation.	Liver.
6	M., 59.	1899	Jaundice first symptom, coming on gradually; diarrhœa; rapid emaciation; laparotomy. Jaundice deep; pain *nil*; vomiting *nil*.	None.	*Nil.*	Liver very large.	—	Great thirst.	Death in seven months, accelerated by operation.	Very small nodule in head of pancreas, too small to feel at operation; found to be cirrhus.	—
7	F., 56.	1900	Pain beneath xiphoid; three months later repeated vomiting; jaundice; emaciation; died from biliary toxæmia.	*Nil.*	Tumour felt.	Nodule of cancer felt late.	Present; also ascites.	—	Death in ten months.	Large cancerous mass in head of pancreas.	20 gall-stones in gall-bladder; nodules in liver; perihepatitis.
8	F., 30.	1901	Abrupt onset of jaundice; pain between shoulders; vomiting; operation. Jaundice deep.	*Nil.*	*Nil.*	Liver very large.	—	—	Death, 12 months.	No post-mortem examination, but cancer of pancreas found at operation.	—
9	F., 45.	1902	Abrupt onset of jaundice; vomiting attacks six weeks later and after three months fæces colourless; gain in weight; slight pyrexia. Jaundice deep; pain *nil*; vomiting early.	?	*Nil.*	Gall-bladder distended after three months.	Present.	Much thirst, slight pyrexia.	Death, seven months after jaundice.	Cancer in pancreas and in wall of common bile-duct.	Cervical glands; liver.
10	M., 40.	1902	Epigastric pain after food, becoming severe; no jaundice, but tumour; laparotomy; death three days later. Pain severe; vomiting *nil*.	*Nil.*	Early symptom.	—	*Nil.*	Tumour appeared but no jaundice; death from operation.	Death, 12 months.	Cancer of size of Tangerine orange; adhesions to pylorus and growth extending to it.	Nodules in liver.
11	M., 50.	1902	Gradual jaundice; two weeks later vomiting; fæces soon colourless; bile in stools for six weeks; drainage of gall-bladder. Jaundice early; pain *nil*; vomiting early and late.	*Nil.*	*Nil.*	Gall-bladder suddenly enlarged.	*Nil.*	Dysphagia.	Death, three months	Large cancer in pancreas narrowing duodenum.	None.
12	F., 56.	1902	Severe pain in abdomen and shoulder and history of gall-stones; three months later jaundice; epigastric tumour; exploratory laparotomy. Jaundice severe; vomiting *nil*.	*Nil.*	Present.	Gall-bladder very large.	*Nil.*	Pain due to calculi (?)	Death, four months.	Large cancer in head of pancreas; many calculi in gall bladder.	Liver.
13	M., 73.	1903	Jaundice; epigastric pain. Jaundice deep; pain present; vomiting *nil*.	*Nil.*	*Nil.*	—	Present.	Pain due to calculi (?)	Death, four months.	Cancer of size of walnut in pancreas; 12 calculi in gall-bladder.	Liver.
14	F.	1903	Sudden jaundice; early melæna; fæces colourless; cervical glands infected; steatorrhœa. Jaundice intense; pain *nil*; vomiting *nil*.	Melæna.	—	Liver and gall-bladder very large.	*Nil.*	Pyrexia; spleen enlarged.	Death, five months.	Nodule cancer of size of bean in pancreas; peripancreatitis.	Cervical glands.
15	M., 51.	1904	Jaundice six years previously; epigastric pain and jaundice a few days later; fæces slate-coloured; rapid wasting. Jaundice deep; pain present; vomiting *nil*.	*Nil.*	Indefinite.	—	—	—	Death accelerated by operation.	Large cancer in pancreas felt at operation; no post-mortem examination; adhesions to pylorus.	—
16	M., 45.	1903	Indigestion and dysphagia; soon jaundice; fæces slate-coloured, contained fat. Jaundice deep; pain *nil*; vomiting *nil*.	Melæna and profuse hæmatemesis	*Nil.*	Liver and gall-bladder very large.	—	Dysphagia.	Death, four months, from hæmatemesis.	Large cancer in head of pancreas; much blood in stomach, but no ulcer.	None.
17	F., 68.	1904	Sudden pain in right hypochondrium, then jaundice and colourless fæces; operation, removed stone from gall-bladder. Jaundice deep; pain acute; vomiting *nil*.	*Nil.*	*Nil.*	Much enlarged.	Present.	Gall-stone removed at operation.	Death, seven months.	Small carcinoma in head of pancreas.	Liver.
18	M., 44.	1904	Umbilical pain, nausea, and jaundice ten days later; operation showed soft cancer of pancreas; died soon after. Jaundice deep; pain present; vomiting *nil*.	*Nil.*	Definite in one month.	Very large.	*Nil.*	—	Death accelerated by operation.	Hard nodulated carcinoma in head and nodules in body of pancreas.	Commencing small dots of cancer on pylorus.
19	M., 53.	1897	Signs of mediastinal tumour only. Jaundice *nil*; pain *nil*; vomiting *nil*.	*Nil.*	*Nil.*	*Nil.*	*Nil.*	—	Death, one year.	Pancreas almost destroyed by cancer.	Mediastinum.
20	F., 55.	1906	Occasional abdominal pain and nausea; three months later jaundice and colourless fæces containing fat; ascites. Jaundice deep; pain severe; vomiting *nil*.	*Nil.*	Felt.	Large.	Present.	Ascites.	Death, six months.	Cancer of head of pancreas extending into its body; cancer in gall-bladder and 19 calculi.	Liver; large mass of cancer.

point in this case was that jaundice *preceded* the attack of acute colic.

The diagnosis of cancerous enlargement of the head of the pancreas may be considered together with that of chronic pancreatitis, the points of distinction between the two being afterwards discussed. In the early stage of either condition it is quite exceptional for a tumour, definitely ascribable to the pancreas, to be detectable, and as other symptoms than jaundice are likely to be ignored by the patient he does not usually come under observation until the onset of jaundice. The jaundice is accompanied by enlargement and distension of the gall-bladder and by an absence, sooner or later complete, of bile from the fæces, but there is no pain or ascites. The absence of ascites is important, for it serves to exclude cancer of the liver from the diagnosis; jaundice when associated with cancer of the liver arises not from the cancer of the liver itself but from enlargement of lymphatic glands in the portal fissure or from perihepatic bands, and if these press upon the common bile duct sufficiently to occlude it they are sure to press also upon the thinner-walled portal vein and to produce ascites. And cancer of the liver never, in my experience, leads to jaundice without ascites. But the common bile-duct, unlike the portal vein, passes through the substance of the pancreas, enlargement of which may therefore readily produce jaundice without ascites. Absence of pain and complete absence of bile from the fæces serve, as a rule, to exclude obstruction by gall-stones from the diagnosis, though in some cases of pancreatitis bile persists in the fæces for a time after jaundice has come on. And the group of symptoms—jaundice, with a much enlarged gall-bladder and complete absence of bile from the fæces but without pain or ascites—points strongly to pancreatic disease. One affection, however, cancer of the biliary passages, produces almost exactly the same group of symptoms, but the pain in such cases is usually more than in pancreatic disease, and when the growth is in the gall-bladder the latter is more painful and tender than the simply distended gall-bladder. When the growth is not in the gall-bladder but in the common duct I think the diagnosis from pancreatic cancer is almost impossible. Steatorrhœa and azotorrhœa would perhaps favour the diagnosis of pancreatic disease. In two of my cases there was cancer in the biliary canals, as well as cancer of the pancreas. Duodenal ulcer (simple or malignant) involving the orifice of Vater produces jaundice with colourless fæces and melæna, thus greatly resembling pancreatic disease, the only distinction between the two being the slender one of the degree of pain felt.

Supposing a diagnosis to be made of pancreatic disease, the question as to its nature becomes important, as operation which may relieve or cure pancreatitis is better avoided in malignant cases. How difficult is this question to decide is shown by the fact that even after handling the enlarged pancreas with the abdomen opened operators have come to a wrong conclusion.

The following appear to be the main points of distinction between the two affections: 1. A history of acute onset of symptoms with pain and pyrexia points to non-malignancy. 2. Glycosuria does the same. 3. The more rapidly the evidence of complete obstruction develops—i.e., the more quickly the fæces become quite devoid of bile and the more rapidly the gall-bladder becomes distended—the more probably is the disease malignant. This appears important, for in two of my cases of chronic pancreatitis bile persisted in the fæces a long time after jaundice came on, and in one this gave rise to suspicion of gall-stone obstruction. 4. The greater the distension and enlargement of the gall-bladder the more likely is the disease malignant. Even in the simple disease, however, the gall-bladder may become very tense. 5. Hæmatemesis and melæna point to malignancy, though not absolutely, for in Case A, of chronic pancreatitis, melæna occurred several times. 6. Enlargement of the cervical glands indicates malignancy. 7. Œdema of the feet points to malignancy. 8 The more rapid the emaciation and loss of strength the more probably is the disease malignant; too much stress, however, must not be laid upon this as obstructive jaundice from any cause leads to rapid emaciation, and in a case of non-malignant pancreatic disease recorded by Mr. Robson, 5 stones in weight were lost in three months, while in one of my cases of cancer of the pancreas there was temporary gain in weight. 9. Mr. Robson remarks that enlarged glands in the neighbourhood of the pancreas are softer and more confluent in malignant than in simple disease; also that calculi in the biliary passages and adhesions are much more common in the non-malignant affection. These points are only ascertainable after the abdomen has been opened, and in several of my cases of cancer there were also calculi. The pancreatic reaction of the urine described by Dr. P. J. Cammidge is regarded by Mr. Robson, taken with other symptoms, as of great utility not only in the diagnosis of the existence of pancreatic disease, but also in determining its nature. Other chemists, however, have expressed dissent from Dr. Cammidge's conclusions.

(To be continued.)

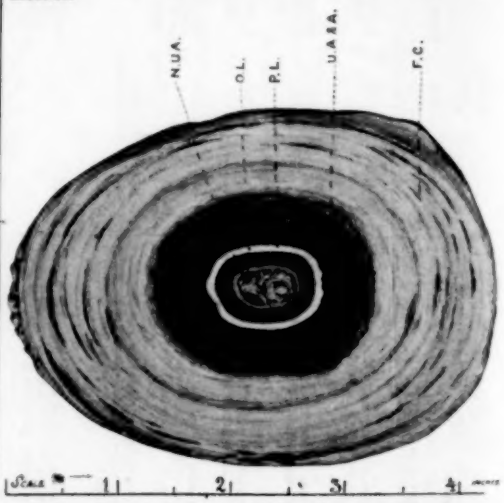
A LARGE VESICAL CALCULUS (18 OZ. 5 DRMS.) SUCCESSFULLY REMOVED BY THE SUPRAPUBIC OPERATION.

BY H. LITTLEWOOD, F.R.C.S. ENG.,

SURGEON TO THE LEEDS INFIRMARY; PROFESSOR OF SURGERY IN THE UNIVERSITY OF LEEDS; AND CONSULTING SURGEON TO THE VICTORIA HOSPITAL, KEIGHLEY.

THE patient, a man, aged 47 years, had always had some trouble in passing urine since childhood. When 15 years of age he consulted the late Mr. Jessop who sounded him and told him there was a stone in his bladder. He refused operation. Since then he has had constant urinary trouble, frequency, pain, and has many times passed blood. He only noticed the passage of matter for the past six months and during this time his symptoms have been greatly aggravated, the pain being constant and almost unbearable. For some years he walked with his body bent and could only move very slowly owing to the pain. He worked as a moulder until ten years ago, was married at the age of 22 years, and was the father of two children.

The patient was admitted into the Leeds Infirmary under my care on Feb. 7th, 1905. He lies fairly comfortably in bed, complaining of some aching pain in the lower part of the body. The urine was very foul, containing blood and pus; it was alkaline and of specific gravity 1011. The stone was felt with the sound and quite easily by rectal and bimanual examination. Until two years ago he had partaken freely of alcohol.



Section of the calculus. N.U.A., Nucleus of urate of ammonia. O.L., Oxalate of lime. P.L., Phosphate of lime, a white stratum. U.A. and A., Uric acid and urate of ammonia. F.C., Fusible calculus, of a pink colour due to uroerythrin.

On Feb. 13th, under general anæsthesia, a suprapubic opening was made into the bladder about three inches in length. The stone was slowly delivered through this opening with great difficulty; two fingers in the rectum helped to lift it out of the pelvis. Some parts of the vesical mucous membrane looked like skin. The bladder was carefully washed out and the opening was partly closed with a continuous catgut suture and a large rubber tube was inserted for drainage The patient was very collapsed after the

operation. At the end of three or four days he was taking nourishment well; the bowels were acting and from the first a good quantity of urine was secreted. The tube was removed from the bladder at the end of the week and on the 24th some urine was passed per urethram. The patient got up about three weeks later and was allowed to go out of doors on March 22nd. At times there was a good deal of phosphatic concretion about the wound which cleared up with a dressing of dilute acetic acid. After this good progress was made and the patient left the infirmary on April 7th, the wound having completely healed. Urine was passed freely per urethram; it was alkaline and contained some phosphate crystals and a few pus cells. The patient remained in good health until the end of August, 1905, getting about, and being able to walk four or five miles a day in comfort. He then became worse again with cystitis and would insist on drinking a fair quantity of whisky. The suprapubic wound broke down and in September I readmitted him to the Leeds Infirmary. He refused treatment and would not stay in. He died on Nov. 25th, 1905, from uræmia.

The calculus weighed 18 ounces 5 drachms, and this I sent to Professor Charles Stewart at the Royal College of Surgeons of England, who kindly had a section made for me, with drawings, and an analysis of the various layers (see figure). Half of the calculus is in the Museum of the College, the other half being in the Pathological Museum of the University of Leeds.

So far as I have been able to ascertain this is the largest vesical calculus which has been successfully removed and on this account I think it should be placed on record. Other large stones successfully removed are as follows:—

Harmer of Norwich	15 oz.
Cline	13 oz. 30 grs.
Mayo of Winchester	14 oz. 2 drms.
Cheselden	12 oz.
Pare (1570)	9 oz.

Sir Astley Cooper remarks that the largest stone he ever saw removed weighed 4 ounces and the patient died 4 hours after removal.[1]

In the *British Medical Journal* of Jan. 7th, 1905, Mr. C. R. Pike of St. Vincent records the successful removal of a stone weighing 13½ ounces, and in the same journal, Feb. 18th, 1905, Lieutenant-Colonel W. K. Hatch refers to a successful suprapubic removal of a stone weighing 17 ounces from a patient under his care in India.

To me it is almost inconceivable that any human being should have a stone for at least 30 years without submitting to an operation.

Leeds.

A CASE OF CANCER OF THE ŒSOPHAGUS OF UNUSUAL TYPE.

BY ELDON PRATT, M.D. LOND., M.R.C.S. ENG.,

With a Pathological Note by CUTHBERT LOCKYER, M.D. LOND., F.R.C.S. ENG.

THE patient, a man, aged 58 years, by occupation a farm labourer, consulted me on July 17th, 1903, complaining of a small lump in the neck. His history was as follows. Three months previously he first noticed, quite by accident, a small lump in his neck of the size of a pea, just above the left collar bone; it was not until a month previously that he noticed the lump to be enlarging, since when it continued to increase in size. The lump, however, never caused any pain or inconvenience. Although he indefinitely felt not quite the thing for the few previous months it was not until the end of May, 1903, that he first noticed some difficulty in swallowing. He found that taking food the first thing in the morning at once gave him some pain down the front of the chest behind the breast bone; it was always some minutes before the pain ceased. Throughout the rest of the day he could take liquids and slops without causing pain, which was easier towards the evening. This sensation continued up to the time when the case came under notice. He then complained that the pain made the chest tender. He had very little appetite in the morning, but it improved towards the afternoon and the evening, when he was able to take plenty of ordinary food. He had got distinctly thinner, he said, during the last three or four weeks. There had been no sickness or vomiting at any time nor had he had any jaundice. His bowels acted regularly, the motions being apparently normal, and he had never passed blood so far as he knew. For several months, however, he had noticed, after sitting in a cart for long, that the tail of his shirt had been discoloured as if by pale blood. (One cannot attach much importance to what a patient in this class says about his motions; it rarely occurs to country labourers to look at them, and even if they wished to see them it would be almost an impossibility, as the closet is invariably a dark wooden shed standing over a pit at the rear of the garden.) The urine for the last five or six weeks had been high-coloured but deposited no sediment. He had noticed that his left arm sometimes felt weak with a dull aching in the shoulder. At no time did he complain of any particular abdominal pain. His family history was not of much importance except to throw light upon the means by which he ultimately met his death—viz., his father died in an asylum, his mother died from old age, one brother died from inflammation of the lungs 20 years ago, and another brother was killed in an accident. His wife was healthy; they had been married 33 years and had no children. He had always enjoyed good health, except for an attack of quinsy when a boy. He had always lived in Sussex and had never had any venereal trouble; he had been a temperate man and a smoker.

The patient presented the appearance of being a big, strong, healthy, burly-looking country labourer On undressing he seemed to be fairly well covered. His conjunctivæ showed no yellowness; his teeth were excessively bad and the tongue was covered with a slight white fur. Nothing abnormal was to be seen in the throat. In the left side of the neck, just above the sternal end of the clavicle, was a lump of the size of a walnut and very hard; it lay below the sterno-mastoid muscle, on each side of which it could be distinctly felt; it was slightly tender when pinched, causing pain in the left breast, and was fairly firmly attached to the deep tissues. The chest was somewhat emphysematous, causing the heart sounds to be distant and the cardiac dulness rather indefinite; the heart sounds were natural and regular and the pulse regular, 68 and of fair volume and tension. There was nothing abnormal in the lungs.

Upon inspection of the abdomen a distinct fulness was found below the costal margin on the right side; on percussion, the liver dulness extended up to the sixth rib and below the costal margin for a full two fingers' breadth. A somewhat indefinite mass was felt in the epigastric region, slightly tender on palpation, very resistant to pressure, and dull on percussion, the dulness being continuous with the liver dulness; the mass extended to within two fingers' breadth of the umbilicus and for two and a half fingers' breadth to the left of the middle line up to the left costal margin. The whole mass moved slightly with respiration. The rest of the abdomen moved evenly and was resonant. No lumps could be felt around the navel or elsewhere.

FIG. 1.

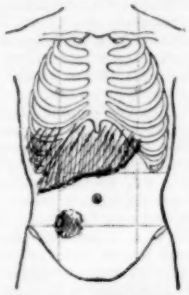


Diagram of condition on Sept. 22nd, 1903.

FIG. 2.

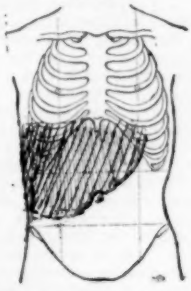


Diagram of condition on Oct. 15th, 1903.

He had a double reducible inguinal hernia for which he was wearing a truss. Nothing abnormal could be felt per rectum; the urine, rather excessive in pigmentation, contained no abnormal constituents.

To indicate briefly the subsequent history. The patient was admitted to the Sussex County Hospital on August 1st

[1] Anomalies and Curiosities of Medicine, Gould and Pyle.

under the care of Mr. W. Furner, to whom I am indebted for permission to use the notes taken while he was in that institution. He was examined under an anæsthetic on August 10th, but nothing further was elicited. Mr. Furner held the opinion that it was a malignant growth involving the omentum and perhaps the stomach. No operation was performed nor thought advisable. During the patient's stay in the hospital his temperature was throughout subnormal and his bowels were opened daily. He was discharged on August 12th, only to be re-admitted on Sept. 10th and again on the 17th. On Sept. 22nd he was again examined under gas and ether, when the large mass could be felt in the front of the abdomen, as in Fig. 1, and a smaller, very hard lump deep down on the right side; this small lump was thought to be separate from the larger mass. The patient had been taking iodide of potassium for the last few weeks but without any influence on his condition. I saw him frequently at varying intervals; he seemed to get rapidly thinner and more and more depressed about himself. His condition on Oct. 15th showed marked enlargement of the liver and epigastric mass, as in Fig. 2, with some bulging of the right side and loin outwards. At no time was dysphagia a marked symptom. He never remained in hospital for long at a time, but (a point of some interest perhaps in view of subsequent events) he witnessed during his stay in the wards no less than three cases of "cut-throat." This means of ending one's life evidently impressed him, as he mentioned it to his wife more than once. He complained latterly of considerably more abdominal pain than he had done before; this pain he described as a horrible, dull, intolerable sort of pain, and he seemed very miserable that no operation could be done to relieve him.

On the morning of Nov. 8th, 1903, the man, influenced by an inherited predisposition to insanity, also by what he had seen in hospital, but most perhaps by the pain which he so silently and manfully bore, brought the tragedy to a close by committing suicide. I was hastily summoned to his home early on that morning to find that he had cut his throat with a razor in the garden closet. On the seat was found a brief note to his wife saying "he could not stand the pain any longer." Death must have been instantaneous.

On Nov. 9th I made a post-mortem examination. All the structures in the neck were completely divided by a gash measuring nearly five inches long. On opening the abdomen an enormously enlarged liver presented with five obvious bosses of cancer growth, the largest of these being as big as a cocoa-nut and the smallest not smaller than a good-sized Jaffa orange. There were numerous smaller nodules both on the surface and in the substance of the liver. The growths on section were softish and oozed blood. The liver weighed 150 ounces. Some of the glands in the mesentery were apparently slightly enlarged. The stomach was empty, narrow, and elongated, but was not involved in the growth. The intestines, traced carefully throughout, revealed no growth, and it was not until I had removed the liver and explored the œsophagus that the primary growth was found lying on the spine just before passing beneath the diaphragm. The primary growth was hard. The heart, lungs, brain, and other organs were natural.

Pathological note by Dr. CUTHBERT LOCKYER.—Œsophageal growth and growth from liver received from Dr. Eldon Pratt on Nov. 14th. The specimen mounted in a museum glass jar consists of a portion of the œsophagus connected by loose areolar tissue with a part of the wall of the aorta. To the latter is attached an oval, firm growth to be described below. On the œsophageal wall are seen two sinuous shallow ulcers. The larger measures 4 centimetres by 1 centimetre; the smaller, which lies alongside the former, measures 1 centimetre by 2 centimetres. Both ulcers have a slightly raised everted edge and a smooth flat surface which is practically on a level with the surrounding mucosa, the tortuous edge being the only raised part of the ulcers, and no depression of the floor or excavation is present. In the general aspect of these ulcers there is nothing typical of epithelioma or columnar cancer. Except that the edges are not undermined the lesions are more like those of tuberculous ulceration of the intestines than any other familiar condition. The base of these lesions is made up of an infiltrating growth which forms a flattened projection, measuring 3 by 2 centimetres in area, on the external surface of the gullet. Running from this growth in the areolar tissue between it and the aorta are several large blood-vessels and lymphatics. These vascular structures run into the capsule of a hard scirrhous-looking mass which is firmly adherent to the aortic wall. This growth measures 4 by 2 centimetres, and on section through its long vertical axis it presents a firm, greyish, uniform appearance. Sections have been made: (1) Of the edge and surface of the large ulcer on the mucous surface of the œsophagus; (2) of the infiltration in the muscular wall; (3) of the network of vessels and lymphatics between the gullet and aorta; (4) of the hard growth on the aorta; and (5) of the deposit in the liver.

Section 1.—The edge of the ulcer is composed of proliferating cubical epithelium continuous with that covering the surface of the œsophagus. This epithelium shades off into tissue which composes the surface of the ulcer. The surface of the latter is made up of epithelial new growth and round-celled infiltration, and these elements extend deeply, invading the tissues of the submucosa and the muscle bundles beneath. In the submucous tissue are therefore seen masses of spheroidal epithelial cells with large nuclei; these masses lie in broken-down alveolar spaces, the latter being bounded by infiltrated fibrous tissue, carrying vessels the walls of which are thickened.

Section 2.—Within the muscular layers of the œsophagus, deep to the ulcers and extending wide of their margins, is seen a continuation of the infiltrating growth. The character of the component cells has here totally changed, and the appearances are those of a secondary lymphosarcoma. The sarcomatous-looking cells are arranged in definite large oval masses within alveolar spaces limited by strong bands of new fibrous tissue. The cell areas contain much free hæmorrhage and elementary blood-vessels and the central parts of the larger masses are necrotic and breaking down. The muscle bundles show commencing post-mortem change.

Section 3.—Taken through the lymphatics and blood-vessels which lie in the connective tissue between the œsophagus and the aorta. It shows a small focus of growth made up of lymphoid-looking tissue arranged in definite alveolar spaces, the latter having thick fibrous walls.

Section 4.—This was taken through the growth adherent to the aorta. In macro- and microscopical features this growth resembles a scirrhous carcinoma of the breast. It is mainly composed of dense, coarse, interlacing fibrous tissue. Occupying branching longitudinal narrow clefts and also alveolar spaces within this fibrous matrix are seen definite epithelial cells with large nuclei. The cells are clustered side by side with no inter-cellular substance between them; they vary in shape. Some are columnar, others spherical, others irregular. The most uniform feature they possess is the character of the nuclei. They all show a large oval nucleus, which stains well with Ehrlich's hæmatoxylin. The nuclear protoplasm is undergoing karyokinesis. Large areas of this growth are very necrotic.

Section 5.—Taken through a secondary nodule in the liver. It shows a growth resembling a lymphosarcoma, the cells being similar to those seen in Sections 2 and 3 and totally unlike the cells seen in Sections 1 and 4. The growth is not encapsuled, but at its periphery it is spreading irregularly amidst the neighbouring degenerate liver substance. The growth is very friable and broken down in its centre and shows the presence of free hæmorrhage. The primary growth arose from the columnar cells of the œsophageal mucous membrane; nowhere can squamous epithelium be found in the neighbourhood of the edge of the ulcer and no squamous cells come into the composition of the growth. That one type of epithelium may transmute to another type is a well-recognised fact, such metaplasia having been seen again and again in the endometrium of senile uteri where the early ciliated columnar has been shown to pass into the squamous epithelial cell. The same process of metaplasia goes on frequently in carcinoma corporis uteri. But in this instance we appear to have an example of a much more complete abrogation of our commonly accepted pathological classification of neoplasms, inasmuch as the transmutability of the cells seems to have broken down the line of demarcation between epi- and mesoblastic new growths, the neoplasm appearing first as an epiblastic structure, and (following the order of its invasion) next as a mesoblastic growth, then again reverting to the epiblastic type, and finally (in the liver) assuming once more the features of mesoblastic tissue.

The obvious suggestion from this behaviour of cells in a new growth is that inasmuch as all cells are derived from one common cytological origin our present classification into epi-, hypo-, and mesoblastic new growths is purely artificial, and although we must accept it as a convenient general working

hypothesis we must be prepared to find growths which cannot be relegated to either class if we wish to understand their nature in all its bearings. In fact, our present classification may in time have to be broken down and give way, like the artificial Linnæan classification of plants had to do, to some more natural arrangement yet to be discovered.

Henfield, Sussex.

NOTES ON THE VALUE OF BACTERIOLOGICAL EXAMINATIONS OF THE BLOOD IN TYPHOID FEVER AND OTHER BACTERÆMIAS.

BY FRANK GEORGE BUSHNELL, M.D. LOND.,
PATHOLOGIST, STEPHEN RALLI MEMORIAL LABORATORY, SUSSEX COUNTY HOSPITAL, BRIGHTON.

THE Widal reaction for typhoid fever frequently gives in this locality indefinite reactions (i.e., slight loss of motility of bacilli and a few small loose clumps within one hour) even when the clinical diagnosis is typhoid fever, and this may be so even in the third week of the illness. The absence of agglutination may be due either (1) to defective formation of agglutinins or (2) to the infection being due to a bacillus which, though closely allied to, has specific differences from, the bacillus used to carry out the serum reaction; for example, paratyphoid infection would fail to agglutinate "completely" cultures of the bacillus typhi. I would instance a case, which compares with one recorded by Dr. T. J. Horder at the Pathological Society of London on Jan. 15th, 1907, in which the cultural identification of bacillus typhi from the blood during life confirmed the clinical diagnosis, the Widal reaction being incomplete on two occasions (once in the public health laboratory). For a long time past continental and American workers have recommended this method of diagnosis and I have been impressed by its widespread adoption in the hospitals of Canada and America. The technique to be employed is that of ordinary bacteriological examinations of the blood,[1] but it is imperative *to dilute the blood* well. I place 10 cubic centimetres of blood into 250 cubic centimetres of plain peptone broth (or gall glycerine peptone, taurocholate of soda broth, &c., are used by some). I believe that the value of the agglutination test by an immune serum in establishing the identity of the bacillus in question cannot be over-estimated. The cultural tests for bacillus typhi are, in my experience, comparatively valueless, being mostly negative. Thus I have isolated from an inflamed Fallopian tube and again from the blood of a case of subacute rheumatism (with endocarditis and pleurisy) bacilli which were culturally practically indistinguishable from the typhoid bacillus.

The views now expressed were clinically illustrated by the following case already referred to. A patient, 26 years of age, was admitted into the Sussex County Hospital, under the care of Dr. Edward F. Maynard, with a history of abdominal pains, diarrhœa, and sickness, which had been becoming worse for a fortnight previous to admission. The temperature was 103·4° F., the abdomen was distended, there were rose-red spots on the abdomen and chest, the tongue was coated with streaky white fur on each side of the middle line, the motions were greyish-white and loose, and the spleen was palpable on deep inspiration. Tenderness and doughiness were present and were especially marked in the right iliac fossa. Some moist crepitations were heard over both sides of the chest. The heart sounds were feeble and there was no murmur; the urine gave Ehrlich's reaction; it contained no albumin. The blood on Dec. 17th, 1906, gave an "indefinite" Widal reaction in 5 per cent., 2 per cent., and 1 per cent. dilutions in 45 minutes, with small clumps and loss of motility in some bacilli. (A previous Widal test was negative.) Bacillus typhi was not found among the numerous bacteria present in the sputum. The blood taken four days before death contained numerous bacilli of the coli-typhoid group, which culturally were examples of the bacillus typhi. The colonies which grew on the Conradi-Drigalski medium were blue; acid was formed in maltose and glucose but no gas; sucrose litmus was not reddened; lactose was untouched in one tube and in another was faintly acidified; neutral-red broth and McConkey's agar medium were unaffected.

[1] Byre's Bacteriological Technique.

[Neither typhoid bacilli nor those intermediate between them and colon bacilli can ferment lactose even to the extent of acid formation. Both typhoid bacilli and the intermediates can ferment glucose and other mono-saccharids, the former without, and the latter with, production of gas.[2]]

The patient became comatose and died on Dec. 23rd. The necropsy made on the 24th showed numerous typhoid ulcers with swelling of the solitary follicles of the small intestine. The spleen, kidneys, and liver showed cloudy swelling. Cultures were made from the heart's blood, spleen, jugular vein thrombus, gut, and urine. The blood from the heart and spleen gave typhoid-like cultures; the others fermented lactose with formation of gas, showing that the bacillus coli was present. The patient's blood obtained before and after death did not agglutinate completely these bacilli. Microscopically, the liver showed multiple focal necrosis with thrombosis of the interlobular branches of the portal vein; the kidney contained numerous bacilli, and the ulcers were of the typhoid type.

The power of fermenting lactose exhibited by these typhoid bacilli, though slight, is noteworthy as being unusual. In view of the absence of gas formation in the glucose tubes the bacilli were not paratyphoid, which are supposed to give rise to a comparatively mild infection.

Brighton.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON THE ACTION OF CERTAIN REMEDIES IN A CASE OF GONORRHŒAL OPHTHALMIA.

BY W. NEVILL HEARD, M.B. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.,
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THE case was that of a recently born infant in whom, as I was informed by the mother, a purulent discharge from the eyes was first noticed to be present on the evening of the third day after birth. When I first saw the case on the fifth day the disease was then well developed, the only treatment that had been adopted up to my arrival being the dropping into the eyes of cow's milk which, unless the lactic acid bacillus has an inhibitory action upon the gonococcus possibly afforded a good culture medium for the last-named micro-organism. The discharge being both copious and purulent I commenced treatment by hourly washings of the enormously swollen conjunctival sac with a saturated solution of boric acid; and after attending in person some four times that day, in order to assure myself that the relatives were capable of using the syringe in such a fashion as not to cause damage, I left them with strict injunctions not to fail night and day with these irrigations. I must add also that on each of these four occasions I instilled into the eyes a few drops of a 25 per cent. solution of protargol, after the manner of Darier. On the next morning the condition was about the same, the lids being so swollen that it was hardly possible to get a look at the interior of the eye; but, as far as could be judged, although the bulbar conjunctiva was dusky red and swollen, the cornea was quite clear as yet. Finding that the remedies were apparently being used intelligently I substituted a 1 in 4000 solution of mercuric perchloride for the boric acid and as before instilled the protargol, though I was not satisfied that it had produced any effect on the morbid process.

On the morning following the use of the perchloride I was greeted with the remark that the eyes had improved a little; "the new lotion suited them better," was the way it was put, and certainly on looking at them I think it was possible to determine that their condition was slightly bettered. Being very dissatisfied with the action of the protargol—seeing that what little improvement there was had to be ascribed to the perchloride—I swabbed out the eyes with a solution of silver nitrate (10 grains to 1 ounce) with confidence that I should witness a change such as former experience had led

[2] B. H. Buxton: Journal of Medical Research, vol. iii., No. 1, pp. 201–230, 1902. Savage: Bacteriological Examination of Drinking-water, 1907. E. Libman: Johns Hopkins Bulletin, vol. xvii., No. 184, July, 1906.

me to expect. Nor was I disappointed, for on the next morning the eyes were most markedly better, though as the effect of the silver nitrate began to wear off after the expiration of 24 hours, the violence of the inflammatory process tended to increase again until it was checked by another application of the nitrate. It would be useless to detail the further progress of the case except to say that on one occasion I substituted a solution of chinosol for the mercury, only to bring about an immediate increase of the inflammation. This I was led to do partly because an eminent eye specialist once told me in conversation that he had completely discarded mercury for chinosol, and partly also because I myself thought that I had got better results with this drug in the treatment of seborrhœa than with other antiseptics, including perchloride. Though progress was slow, the nitrate always showed itself capable of checking the disease and in the end the eyes recovered completely, the cornea never from first to last showing the slightest sign of any injury to its epithelium.

I think that from these facts one can be certain in this one case at least:—1. That for irrigation the perchloride was superior to the boric acid, and still more so to the chinosol. 2. That while it was doubtful if a 1 in 4 solution of protargol had any effect at all upon the disease, the action of a solution of silver nitrate (10 grains to 1 ounce) was immediate and certain at all stages.

Swanage.

A CASE OF REUNION OF AN ALMOST SEVERED LEG.

BY THOMAS HAYES, M.D. EDIN., M.R.C.S. ENG.

THE report of three cases of rupture of the tendo Achillis recorded by Mr. W. H. Brown in THE LANCET of Jan. 19th recalls a very remarkable case which occurred in my practice 35 years ago, in which the tendo Achillis, the tibia, and the fibula were completely severed. The only parts that escaped amputation were the tendons and other tissues in front of the bones. The history of the case is as follows. In August, 1872, a youth, 18 years of age, the son of a farmer, was in a meadow in temporary charge of a pair of horses attached to a mowing machine while the mower was having his dinner. He ventured *proprio motu* to do a little mowing on his own account and the reins becoming entangled he went in front of the machine to set things right. The horses moved forward, with the result that his right leg was caught by the toothed blades of the machine and all but severed from his body. His mother at once set out in a dray car with her son, intending to go directly to me, a distance of 12 Irish miles. When about five miles on her journey she feared that he might bleed to death and turned to the next town where there were three resident medical men. None of them were available but a young army surgeon at home on leave examined the case and bound it up temporarily, as he recognised that it was a case for immediate complete amputation. One of the local medical men, who came home after some time, told the mother that immediate amputation was absolutely necessary to save the life of the young man and that no other course was possible. She, however, refused and said that she would rather her child should die than lose his limb. She came to me the next day, whereupon I advised her to consent to the inevitable and to allow the medical men to act according to their judgment. She, however, stated again that she would prefer he should die rather than lose his limb and insisted on my seeing him. On arriving at the place I found the almost severed limb turned up to the shin, a large plug of lint in the wound, and all well bandaged. When I removed the dressings there was no bleeding and the foot was quite warm, so that the anterior tibial blood-vessels were carrying on the circulation. I cleaned out the wound, removed from it some blades of grass, brought the parts together, and joined both ends of the tendo Achillis together by a very strong suture. I then sutured the wound, dressed it with lint-and-water dressing, put on a slipper with a strap attached and fixed to the knee to extend the foot backwards, bent the foot backwards, and kept the knee also bent. There was no constitutional disturbance, neither was there any pain in the wound or wounded limb.

The progress of the case was very hopeful. In five or six days there was some slight suppuration from the surface of the wound which I dressed with carbolic acid ointment. The wound was healed in six weeks. After a year had elapsed I found that the patient had good use of his limb and walked about without a halt but with a stiff ankle-joint. The tendo Achillis at the seat of division became united to the tibia where it was cut across. Now, after nearly 35 years, he can walk about without any apparent lameness. There are a slight projection of the inner ankle and a sulcus over the cicatrix, but he has a better result than usually follows rupture of the tendo Achillis alone.

Rathkeale, county Limerick.

A CASE OF OPERATION FOR STRANGULATED CONGENITAL INGUINAL HERNIA PERFORMED UNDER DIFFICULT CONDITIONS AT SEA.

BY ARTHUR BAILIE FRANCIS, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

ON June 1st, 1905, one of the stewards on board the Royal Mail steamer *Majestic* of the White Star line was suddenly taken ill and at 6 P.M. I, being the surgeon of the vessel, was sent for. I found him doubled up with pain, lying on the floor of the room which he occupied in common with the other stewards. Examination showed that he was suffering from a strangulated inguinal hernia of large size which had recently been forced down. He was about 21 years of age and came from an inland town; he had never been to sea before but being run down in health he hoped to get the benefit of a sea voyage by joining the vessel as steward. He said that he had had a small rupture from childhood but it had never given him any trouble before. As the man was groaning with pain I injected morphine and atropine and had him removed to a bath-room and immersed in hot water. I administered a full dose of tincture of opium by the mouth and endeavoured to reduce the hernia by taxis. The size of the swelling was about equal to that of an average infant's head at birth and my efforts were ineffectual. I left him in the hot bath for half an hour, and as both the hypodermic injections and the dose of opium given by the mouth had apparently no effect in relieving the pain I gave another full dose of morphine hypodermically and shortly afterwards made another attempt to reduce by taxis, but I was unable to produce any effect upon the tumour. I waited for 20 minutes and tried again with a like result. I then chloroformed the patient and used the taxis once more. The tumour was as tense as before and I could not produce the slightest effect upon it. We were then about 160 miles out from Queenstown, going westward, in the full heave of the Atlantic and a storm was blowing. I, however, decided that the only course left open was to operate although the conditions were very unfavourable. I informed the captain (Commander B. F. Hayes, R.N.R.) of my decision, and on giving him to understand the hopeless condition of the man—failing operative measures—he gave his sanction, and to his credit, be it said, offered to slow down the ship while I was operating in order to minimise as much as possible the motion of the ship and to stop her altogether when I had reached the most critical stage—namely, opening into the sac of peritoneum. Few captains would have felt themselves called upon to stop a mail steamer even for an emergency like this. I had the man removed to a hospital cabin and prepared him in the usual manner by shaving, washing, and scrubbing with antiseptics, &c., and after sterilising the instruments I began to operate at 10 P.M., four hours after I had first seen the patient. My only assistant was the hospital steward, a man who had only a slight knowledge of drugs and no experience of any sort of operation. I chloroformed the patient by the Edinburgh method and instructed the steward how to keep him under, the patient being held and his movements controlled by the chief third-class steward and another steward. I made the usual incision and dissected down carefully. When getting near the sac I sent to inform the captain who ordered the steamer to be stopped entirely for about 15 minutes, which had the result of rendering her almost motionless. I carefully entered the sac and relieved the strangulation with a hernia knife and director. In the neck of the sac I found an undescended testicle, which I left *in situ*. There was little hæmorrhage and I sutured the wound and dressed it in the usual manner, and had the man comfortably in bed at about 12.30 A.M.

During the operation the chloroform had been pushed too vigorously by the steward and the patient stopped breathing, so that I had to pull out his tongue and employ artificial

respiration, injecting at the same time a maximum dose of liquor strychninæ hypodermically, which I fortunately had placed in readiness for such a contingency. The patient progressed favourably, his temperature only rising 1°F. on the day after the operation and then falling to normal; his pulse was normal throughout. He was given no food for 48 hours and then had small quantities of milk at short intervals with ice to suck. The bowels remained confined for ten days when they acted of their own accord and were moved regularly every day afterwards. On the return of the vessel to Liverpool in a fortnight's time the man was quite convalescent, the wound had healed by first intention, and he walked ashore. I may say that the exciting cause was seasickness, the lax condition of all the tissues and the efforts at vomiting producing a hernial protrusion of such magnitude as I had never seen before in 12 years of practice.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Feb. 11th, Mr. C. W. MANSELL MOULLIN, a Vice-President, being in the chair.

Dr. O. K. WILLIAMSON showed a case of Congenital Morbus Cordis in a girl, aged 18 years, who had suffered all her life from cyanosis and shortness of breath, more marked on exertion. Physical examination revealed enlargement of the right side of the heart, together with a harsh systolic murmur conducted downwards from the second left space, and loudest at a point between the apex and the sternum in the fourth left space; there was also weakness of the pulmonary second sound. These signs suggested a patent interventricular septum together with pulmonary stenosis.

Dr. T. D. SAVILL exhibited a case of Clonic Respiratory Spasm (Spasmodic Tic) treated by Systematised Respiratory Exercises in a boy, aged 17 years. The spasm, dating from a fright, had existed more or less for 11 years. Lately the spasms had become so severe and the barking and grunting noises so loud that while in the Westminster Hospital the patient had to be isolated. Two months ago he was admitted to the West-End Hospital for Diseases of the Nervous System under Dr. Savill and had been taught a series of respiratory exercises. The improvement was now so great that the patient was able to resume his work as a light porter and in his spare time to do fret-saw work.

Mr. L. B. RAWLING exhibited a case of Appendicostomy for Dysenteric Ulceration of the Large Intestine. The patient was a man, aged 37 years, who had contracted dysentery in South Africa in 1900. He was invalided from the service and when first seen in the latter part of 1905 he was suffering very severely from all the symptoms of that disease, with the addition of great difficulty in passing any motions on account of stricture of the rectum. He was cured of the latter trouble by free division of the stricture. The tenesmus was so severe and the discharge so profuse that the operation of appendicostomy was performed with the object of irrigating the large intestine with suitable solutions. The result was all that could be desired, the discharge having practically ceased after two months' irrigation. The patient had gained a stone in weight and now carried out the irrigations himself. It was not proposed to close the wound for some time.—Mr. MANSELL MOULLIN, Mr. A. E. J. BARKER, Dr. WILLIAM EWART, and Mr. C. GORDON WATSON endorsed the advantages to be derived from appendicostomy as compared with cæcostomy in such cases.

Mr. RAWLING also exhibited a case of Abscess of the Frontal Lobe in a man, aged 40 years, who had been operated on three times during the past two years for the entire removal of the abscess wall, which was a quarter of an inch in thickness, with complete recovery.

Mr. BARKER exhibited a case of Ununited Fracture of the Humerus treated by Bier's or Thomas's method of Passive Hyperæmia. The fracture took place in November, 1905, and in May, 1906, as no union had taken place in the fracture, the treatment by hyperæmia was begun. The hand and arm were bandaged with a thin rubber roller up to the elbow and a thick rubber tube was placed in a figure-of-eight over the upper part of the arm and round the shoulder so as to cause congestion of the lower part of the arm. This was kept on every morning for one or two hours, the patient going home each day with the arm in a sling. This treatment was continued until the end of September when a large mass of callus was found consolidating the bone. The result was successful.—Mr. ROBERT JONES (Liverpool) spoke of the simplicity and efficacy of this method of treatment. He had seen cases of ununited fracture of six, eight, or more months' duration successfully treated by these means. He had also met with similar success in those difficult cases of fracture of the tibia after slight injury in rachitic children.—Mr. MANSELL MOULLIN also endorsed the value of the treatment.—Dr. EWART recalled the fact that this method was probably used by Ambrose Paré, but that it was first fully described and adopted by Hugh Owen Thomas in 1876.[1]

Mr. BARKER also exhibited a case of Non-suppurative Absorption of the Head of the Femur, presenting all the characters and many points in the history of coxa vara, in a boy aged 16 years. A skiagram was also shown.

Mr. C. A. R. NITCH (introduced by Mr. C. S. WALLACE, the Senior Secretary) exhibited two cases of Separation of the Upper Femoral Epiphyses in boys aged 15 and 16 years respectively. In both the condition appeared to date from an injury. Skiagrams were also shown. In both cases the symptoms and appearances were consistent with coxa vara, and it was contended that all cases of so-called adult or adolescent coxa vara were in reality due to separation of the upper femoral epiphysis. Very slight injury was sufficient.—These cases were discussed by Mr. RAWLING, Mr. GORDON WATSON, and Mr. C. S. WALLACE, who agreed that most cases of adult coxa vara were in reality separation of the epiphysis.—Mr. JONES, however, thought that a distinction could be drawn between the two conditions.

Dr. F. PARKES WEBER exhibited a case of Multiple Sublingual Calculi in a man, aged 30 years. He was under treatment at the German Hospital for bronchitis. One day he complained of pain under his tongue and on examination of the floor of his mouth a stone of about the size of a very small cherry was found to be extruded to the left of the frenum linguæ and posterior to the orifice of Wharton's duct. On palpation it was quite obvious that other calculi were present on the same side of the tongue. The extruded calculus weighed 1·1 grammes (17 grains) and measured 10 by 12 by 14 millimetres. Analysis showed it to be composed of calcium phosphate with a fair admixture of calcium oxalate and a trace of magnesium phosphate. In this case there had been no intermittent swelling of the submaxillary gland to draw attention to the salivary lithiasis. The flow of saliva through Wharton's duct had apparently not been obstructed. In the case of a man, aged 60 years, recorded by A. Perrone,[2] the whole of the submaxillary and sublingual salivary glands on the right side were excised on account of multiple calculi.

Mr. GORDON WATSON exhibited a case of Arthrodesis for "Flail Limb." The patient, a boy, aged 14 years, had had infantile paralysis at the age of four months, when both lower limbs were affected. Attempts to provide sufficient support with double irons to the hip, to enable him to get about, had been unsuccessful. The right knee was therefore excised and six weeks later the right calcaneo-astragaloid joint was excised to correct the valgus position of the ankle. The patient now wore a straight iron to the hip with a joint at the ankle and hip and could get about far better than ever before and was able with crutches to support his weight on the right leg.—Mr. JONES spoke in favour of the procedure.

Mr. T. H. KELLOCK exhibited a case of Multiple Fibrous Nodules in the Hands, with Dupuytren's Contraction, in a man, aged 51 years. His father suffered from gout and a brother had Dupuytren's contraction affecting the little finger of one hand. The present condition commenced in the left hand three years ago and had become progressively more marked. Scattered over the palmar aspects of both hands were hard fibrous nodules. He had drunk a good deal of beer and a small mass on the left side of the nose was probably a gouty deposit. Considerable improvement had taken place under treatment by iodide of potassium and colchicum internally and inunction with oleate of mercury.

Dr. J. S. COLLIER exhibited a case of Syringomyelia in a man, aged 45 years. He had never been able to appreciate pain properly. Painless whitlows first began to appear in

[1] THE LANCET, August 13th, 1904, p. 442.
[2] Archives Générales de Médecine, Paris, 1904, vol. cxciv., p. 2887.

succession 20 years ago on the left fingers. Slight sphincter trouble had been present for two years and trouble with walking for 18 months. The left hand and forearm presented the firm swollen condition known as "main succulente." The fingers of this hand were thick, distorted, and stunted. Some of the bones of the terminal phalanges had been lost from the whitlows. There was no muscular atrophy. The right hand was normal. There was universal analgesia. There were universal partial loss of temperature sense and marked nystagmus. The gait was spastic and ataxic.

Dr. LEONARD G. GUTHRIE exhibited a case of Precocious Obesity with Hirsuties in a boy, aged five years. The patient's appearance is that of a burly drayman in miniature; his height was 36 inches; his weight was 2 stones, 13 ounces; his cheeks were bright red and distended with fat. The abdomen was bulging. The hair grew low on the forehead, the eyebrows were bushy, and he had an incipient moustache. Coarse brown hair half an inch long covered the dorsal hump and extended down the back and was also present about the genitals, which were otherwise normal for a child of his age. The intelligence was good. The condition of precocious obesity with hirsuties suggested the existence of hypernephroma but no tumour could be felt in the abdomen and there was no evidence of precocious sexual development such as that met with in cases of hypernephroma.

Dr. WILFRED HARRIS exhibited a case of Spastic Paresis of the Left Arm, with Cyanosis in the Left Hand, in a married woman, aged 36 years. The condition had come on gradually about 16 months previously. The reflexes were greatly exaggerated in the affected limb but there were no symptoms referable to either of the lower extremities and no other symptoms elsewhere. The arm was very rigid and the cyanosis was very marked. No electrical changes of importance could be detected in the arm and there was no atrophy.

Dr. E. G. GRAHAM LITTLE showed a case of Psoriasis simulating Lupus Erythematosus in a girl, aged 20 years.

CLINICAL SOCIETY OF LONDON.

Typhoid Fever with Complications.—General Paralysis of the Insane in a Boy.—Idiopathic Dilatation of the Colon.

A MEETING of this society was held on Feb. 8th, Mr. H. H. CLUTTON, the President, being in the chair.

Dr. FRANCIS H. HAWKINS (Reading) read notes of a case of Typhoid Fever complicated by Acute Pneumonia, Pericarditis, and Hæmorrhagic Pleural Effusion. The patient was a female, aged 20 years, whose illness commenced with sore throat and a feeling of stiffness in the legs. Five days later she had a shivering fit followed by diarrhœa. During the course of the illness no typical spots appeared but the abdomen was distended and the bowels moved from twice to seven times daily. Widal's reaction was positive. Early in the third week she expectorated blood and two days later the expectoration was typically rusty. The physical signs gave evidence of consolidation of the left base. Pericardial friction was heard during the fifth week when the patient's condition became critical. The respirations were 42, the pulse was 128, and the patient was markedly cyanosed. Paracentesis was performed and 14½ ounces of hæmorrhagic fluid were withdrawn; no tubercle bacilli were found. After paracentesis the patient improved but the temperature did not become normal till the seventh week. A systolic murmur was heard at the apex in the third week. Dr. Hawkins discussed the rarity and the relative frequency of acute fibrinous pneumonia, pericarditis, endocarditis, and pleuritic effusion as complications of typhoid fever.—Dr. WILLIAM EWART inquired as to details of the treatment employed.—Dr. F. DE HAVILLAND HALL suggested that the phenomena might have been due to a superadded rheumatic infection.—Dr. W. HALE WHITE suggested that the whole disease might have been one of pneumococcal infection. There was an assemblage of features which was extremely rare in typhoid fever. The temperature chart was unlike that seen in typhoid fever. He inquired as to the dilution of the Widal test and the frequency with which it had been done.—Dr. DAVID FORSYTH, in view of the early symptoms in the case—sore-throat and pains in the joints—asked what was the effect of salicylates. Was there any history of previous typhoid fever to account for Widal's reaction?—Dr. HAWKINS in reply said that he had treated the case with hydrochloric acid. He found this the best antiseptic to use as a routine measure in cases of typhoid fever. The fever had fallen for a couple of days when salicylates were given, but had risen again. As to the Widal reaction, it had been tested only once, the blood having been sent to a clinical research laboratory in London. As seven years had elapsed in the meantime he could not recall the dilution employed.

Mr. J. R LUNN and Dr. GORDON M. HOLMES gave an account of a case of General Paralysis of the Insane in a boy, aged 16 years. A clinical description of the case was presented when the patient was shown at a clinical meeting of the society on Jan. 26th, 1906. The patient remained in the same condition until Feb. 15th, when he had a fit of unconsciousness which was followed by more weakness of his left arm and leg. In August it was noted he had right facial paralysis and a spasmodic spastic condition of the left arm and leg, with incontinence of urine. On Sept. 15th he had another fit, with conjugate deviation of his eyes to the left and increased knee-jerks. He died on Sept. 23rd. At the necropsy the skull was opened from behind and the brain and cord were removed. A recent blood clot of about eight ounces was apparently situated between the dura mater and arachnoid membrane and had compressed the brain considerably on the left side. No rupture of any sinus could be found. After the removal of the brain blood could be squeezed out of the cerebral veins in two places, one over the left frontal lobe and the other over the left occipital. This, it was thought, might possibly be the source of the hæmorrhage. No other lesions were found in the viscera. Dr. Gordon Holmes, in demonstrating on the screen a series of microphotographs, remarked that the brain presented no hæmorrhage. The ependyma of the ventricles presented the typical granular condition found in general paralysis. Typical syphilitic endarteritis was found in some of the vessels of the lumbar cord. The cerebral cortex, examined by Nissl's method, indicated chronic atrophy. In the spinal cord there was a slight degree of pyramidal degeneration. Pathologically the case corresponded to general paralysis of the insane.

Dr. H. MORLEY FLETCHER and Mr. H. BETHAM ROBINSON communicated a paper on a case of Idiopathic Dilatation of the Rectum and Colon as far as the Hepatic Flexure. A boy, aged 12 years, was admitted into the East London Hospital for Children on Nov. 15th, 1904. There was a history that he had always had a "large belly" and been rather constipated, and that for the last fortnight there had been a great increase in the size of the belly with more marked constipation but no vomiting or passage of blood per rectum. On admission the abdomen was tense with distended surface veins. The percussion note was resonant all over, and in the knee-elbow position a thrill was obtained over a small area round the navel. On palpation irregular masses were felt in the region of the transverse colon. On rectal examination the tone of the sphincters was normal but the rectum was very dilated. While under observation for a fortnight there was no response to aperient medicines and only poor results from enemata. Abdominal section was done on Nov. 29th and extreme dilatation of the rectum was found with enlargement of the colon as far as the hepatic flexure. From the dilated bowel many pounds of soft, dark fæcal matter were squeezed out of the anus by gradual pressure on the gut. There was considerable hypertrophy of the bowel wall. No large or hard glands were felt in the mesentery; there were no signs of peritonitis nor any abnormal band. The abdomen was closed. After this thorough emptying of the bowel the patient's progress was most satisfactory. He was kept under observation and in March, 1906, it was noted that he appeared to be perfectly well; his abdomen was quite natural and free from any abnormal distension. The bowels acted regularly and naturally without medicine. Rectal examination showed some ballooning of the gut. The boy continued in good health until the evening of July 2nd when he had abdominal pain without any distension; there was diarrhœa which continued for several hours. On the next day he was admitted into hospital in a comatose state and died shortly afterwards. The hypertrophied and dilated colon was exhibited. It now measured 16 inches in circumference as compared with 19 at the operation. The lining membrane appeared healthy and no cause for the dilatation could be found. The most important points in the case were: (1) the great improvement which followed simple emptying of the distended bowel followed by careful dieting and regulation of the bowels; (2) the great improvement in health after the operation and the duration of that improvement; and (3) the sudden

termination of life without any very satisfactory explanation. The cause of the dilatation was very obscure.—The PRESIDENT remarked that the subject of idiopathic dilatation of the colon had already been before the society. He felt persuaded that the proper treatment for such cases was surgical. He advised a preliminary colotomy, followed by a prolonged period of thorough drainage, before attempting any of the more extensive operations. He had met with two cases in persons over 50 years of age; he believed that the formation of a loop or volvulus in the sigmoid flexure was the true explanation.—Mr. G. H. MAKINS also discussed the surgical treatment. He thought that intestinal anastomosis at the base of the dilatation was unjustifiable on account of the tendency for a new dilated loop to form. He instanced three cases in which this had occurred, all in elderly people.—Dr. A. E. GARROD instanced two cases which he had observed, both in children who had had relapsing tetany, indicating the absorption of toxins. These cases had been successfully treated by irrigation. The cause and origin of the dilated and thickened colon were extremely obscure.—Mr. JOHN D. MALCOLM had noticed in certain cases that the lowest part of the dilatation was greatly hypertrophied, while the bowel above was thinned, and he suggested that a kind of sphincter action thus took place, squeezing the contents of the rectum upwards into the ballooned bowel above.—Dr. HALE WHITE, however, believed that if this explanation were true nearly everybody would have a dilated colon. The cause of the dilatation was most uncertain. These cases were certainly not congenital and the term "idiopathic" was a cloak for ignorance as to the true explanation. He believed that there were two distinct varieties of dilatation, one occurring in children and another in old people. Intermediate ages did not appear to be affected.—Dr. FORSYTH supported Mr. Malcolm's view and suggested that the secondary dilatation referred to by Mr. Makins was explained by the non-establishment of the physiological continuity of the bowel, peristalsis being impeded by the ridge of scar tissue.—Dr. H. A. CALEY doubted if such cases of idiopathic dilatation could be regarded as non-obstructive. Fæcal impaction was itself a cause of obstruction and might afford an adequate explanation.—Mr. A. W. MAYO ROBSON also thought that the specimen indicated the presence of obstruction; the sphincter muscle in these cases sometimes showed pathological changes, particularly fibrosis.—Dr. F. PARKES WEBER remarked on the evidences in the urine, such as the presence of indican, in some cases of absorption from the dilated gut.—Dr. FLETCHER, in reply, expressed the belief that the dilatation of the upper part was secondary to some obstruction in the lower part of the gut, but the sphincter muscle was quite normal in the present case.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—Election of Officers.

A MEETING of this society was held on Feb. 6th, Dr. W. R. DAKIN, the President, being in the chair.

The following specimens were shown:—

Mr. J. BLAND-SUTTON: A Villous Tumour of the Uterus in a woman, aged 84 years; hysterectomy; recovery.

Mrs. F. N. BOYD: A specimen of Diffuse Fibromyoma of the Uterus occupying the whole of the supravaginal portion of the cervix and the greater part of the body, partially intraligamentous and subperitoneal in its development, and complicated by pregnancy in the right cornu of three to four months' duration. Also a specimen of Papilliferous Cystic Adeno-Carcinoma of the Left Ovary removed from a patient, aged 54 years.

Mr. A. H. G. DORAN (for the late Dr. G. BAGOT FERGUSON): Chorio-endothelioma of the Uterus, Intraperitoneal Hæmorrhage, Hysterectomy, and Death.

Dr. W. W. H. TATE: Case of Suppuration in Fibromyoma Uteri following Confinement treated by Abdominal Hysterectomy. Also a case of Coexisting Tubal and Uterine Pregnancy; the tubal pregnancy was treated by abdominal section, with subsequent delivery of living child at term.

After the reports of the treasurer and the honorary librarian had been read and adopted the PRESIDENT delivered the Valedictory Address.

The following list of officers and council for the ensuing year was announced and the proceedings closed with votes of thanks to the retiring president, officers, and members of council:—President: Dr. Herbert R. Spencer. Vice-Presidents: Mr. Albert C. Butler-Smythe, Dr. Montagu Handfield-Jones, Dr. John Phillips, and Sir William Japp Sinclair. Treasurer: Dr. George Ernest Herman. Editor of Transactions: Dr. Herbert R. Spencer. Honorary secretaries: Dr. Robert Boxall and Dr. Arthur H. N. Lewers. Honorary librarian: Dr. William John Gow. Other members of council: Dr. Henry Russell Andrews, Dr. Henry Briggs, Dr. William H. B. Brook, Dr. Charles James Cullingworth, Mr. George Eastes, Dr. Thomas W. Eden, Dr. John Shields Fairbairn, Dr. John Benjamin Hellier, Mr. Henry Thomas Hicks, Dr. Jamieson Boyd Hurry, Dr. John Martin Munro Kerr, Dr. Cuthbert Lockyer, Dr. Charles Hubert Roberts, Dr. Amand Routh, Dr. Mary Ann Dacomb Scharlieb, Mr. James Henry Targett, Dr. Herbert Williamson, and Dr. Thomas Wilson.

OPHTHALMOLOGICAL SOCIETY.

Tubercle filling the Eyeball in which the Opsonic Index was Regularly Taken.—Family Tree of Nyctalopia.—Streptococcic Infection of the Conjunctiva.—Stereoscopic Vision.—Exhibition of Cases.

A MEETING of this society was held on Jan. 31st, Mr. PRIESTLEY SMITH, the President, being in the chair.

Mr. SIMEON SNELL (Sheffield) communicated a case of Tubercle filling the Globe in which the Opsonic Index was taken and Tuberculin employed. The patient was a boy, aged 12 years, who before coming under Mr. Snell's care in April, 1906, had been under surgical treatment for tuberculous abscesses in the arm and leg. When seen the sight of the left eye had begun to fail. The left eye had been prominent for four months and appeared slightly larger than normal; the conjunctiva was injected but there was no pain. Vision was entirely lost. The interior of the eye was occupied by a yellowish-grey mass, over which the retinal vessels were seen to be coursing; the lens was clear, Tubercle of the choroid filling the vitreous chamber was diagnosed. Immediate enucleation was decided against. A little later the eye became much inflamed and the boy suffered severe pain. Tension was raised and the eyeball was distinctly increased in size and the interior had become more filled up. At this time it was decided to try the effect of tuberculin injections and a record of the opsonic index was regularly taken. Tuberculin injections of $\frac{1}{10}$th milligramme were given. The boy greatly benefited and the eye became smaller and the mass in the interior was thought to be caseating. The eye was enucleated on Sept. 17th, by which time it was no larger than normal. Since the operation the boy had done exceptionally well. Examination of the bisected eye showed it to be tuberculous but a search for tubercle bacilli was not successful. The choroid was the structure most affected.

Mr. SNELL also related particulars of a family several members of which had suffered from Nyctalopia. The earliest ancestor who suffered was the patient's grandmother. Information was obtained of 63 of her descendants extending to the fourth generation. Out of the 64, 12 were affected with nyctalopia, nine being males and three females. A peculiar feature was that the males had girls affected and boys healthy, and the females had boys affected and girls healthy.

Mr. ARNOLD LAWSON related two cases of Acute Streptococcic Infection of the Conjunctiva. Case 1 originated in a child 16 days after birth. For the first few days of the infection the symptoms were of a moderate nature, consisting of a slight muco-purulent discharge with some swelling of the lids. After about ten days, however, the cornea of each eye became suddenly infiltrated and the case then ran a very rapid and acute course. A tough tenacious membrane formed over both lids and the bulbar conjunctiva of both eyes. Within 36 hours of the first infection of the corneæ the sight was hopelessly destroyed. The sloughs began to break down about three weeks after the first symptoms of infection and both corneæ had perforated some days before this. The child's health was never affected throughout the disease. Swabs taken from the conjunctival sac showed a very nearly pure culture of the streptococcus pyogenes, and fresh swabs taken a day or two later as a control confirmed the first examination. Mr. Lawson first saw the case when the corneæ were infiltrated and nothing then seemed of any avail in allaying the course of the disease. Case 2 occurred in a child, aged six years, convalescing from scarlet fever, who was then attacked with measles. Ten days after the

onset of measles the temperature became very high and assumed a fluctuating type, such as is seen in pyæmia. At the same time brawny swelling of the eyelids commenced, accompanied by little or no discharge. After a few days the discharge began to increase and the cornea suddenly became infiltrated. Within 24 hours of this infiltration being noted the condition of the eyes was practically hopeless and both cornea rapidly perforated, with complete destruction of the sight. Mr. Lawson saw the case for the first time when the cornea were completely opaque, and both the palpebral and ocular conjunctiva of each eye was covered with a dense yellow tenacious membrane. The child continued exceedingly ill and recovery was doubtful for several days. The sloughs began to separate about three weeks after the onset of the disease and the resulting cicatricial contraction of the conjunctiva was very severe. The bacteriological report showed that infection was a mixed one and due to the presence of streptococcus pyogenes and staphylococcus pyogenes aureus, which were alone present in large quantities and in equal proportions. In Case 1 the contraction of the conjunctiva was also very great and in Case 2, as in Case 1, no treatment seemed to be of the slightest avail in arresting the course of the disease.—In the discussion that followed Mr. F. HEWKLEY, Mr. N. BISHOP HARMAN, Mr. J. H. FISHER, Dr. F. E. BATTEN, and Mr. J. HERBERT PARSONS took part, citing similar cases, but no remedy had been of avail in controlling the disease.

Mr. G. T. BROOKSBANK JAMES read a short paper entitled, "Some Notes on Stereoscopic Vision." He remarked that nearly all the experiments in connexion with this subject had been carried out at comparatively short distances from the eye. He then described an apparatus which he had found very convenient for rapidly estimating the stereoscopic sense at the distance at which the visual acuity was usually tested—i.e., six metres. He considered that the test which he described was the most delicate and at the same time the most simple of the various tests for the sense of the third dimension. The apparatus consisted of a box the roof and sides of which had been removed, while the floor and the front and back walls remained. The front wall presented an oblong aperture in its centre. An electric light at each side of the box provided an equal illumination for the interior. The front and back walls were covered with black velvet. The floor was pierced with round holes in lines at right angles to each other and separated by intervals of one inch. The test objects were sticks painted a brilliant white and were of different sizes. They were long enough for the two extremities to be hidden behind the margins of the aperture in the front wall of the box when placed upright in the holes. In this arrangement the many devices which the one-eyed person is accustomed to call to his aid in estimating depth are wanting and he is totally unable to tell the position of the sticks when they are placed slightly apart and one behind the other. They always appear to him to be in the same plane. The apparatus can, of course, be used at varying distances and affords a convenient way of ascertaining the quality of the stereoscopic vision in cases of partial amblyopia of one eye. Mr. James alluded to the theories held with regard to the estimation of the sense of depth and also to the importance of recognising the several grades into which binocular vision can be divided.

The following cases were shown:—Mr. CHARLES S. BLAIR: Extensive Colobomata of each Lens. Mr. R. R. CRUISE: A case of Acne Rosacea associated with Keratitis. Mr. R. M. GUNN: Unusual Type of Family Optic Atrophy. Mr. C. WRAY: A case of Sympathetic Ophthalmia treated by the Acetozone Method. Mr. PARSONS: Partial Thrombosis of a Retinal Vein.

LIVERPOOL MEDICAL INSTITUTION.

The Gametoid Theory of Cancer.

A PATHOLOGICAL meeting of this society was held on Feb. 7th, Mr. FRANK T. PAUL, the President, being in the chair.

After the exhibition of numerous specimens Mr. C. E. WALKER, assistant director of Cancer Research in the University of Liverpool, read a paper on the Gametoid Theory of Cancer. He explained that as living matter existed only in the form of cells, all problems of living phenomena must be ultimately cell problems. As all multicellular organisms, whether plants or animals, originated from a single cell (the fertilised ovum), the potentiality of all the cells subsequently produced from it was contained in the fertilised ovum. This general potentiality was retained to some extent by even the highly differentiated cells of the body and examples were quoted to illustrate this. The mode of division by which the cells of the body were produced was described and the essential differences between this mode of cell division and that observed in the production of sexual elements (spermatozoa and ova) were explained. The reduction in the number of chromosomes to one half of the number found in the cells forming the body tissues which was observed to take place in the sexual cells was compared with a similar phenomenon occurring in the cells forming malignant growths. Mr. Walker explained that though a reduction in the number of chromosomes below that found in normal tissue cells had previously been described as occurring among the cells of malignant growths, this reduction had been supposed to be quite irregular. In 1903 Professor Farmer, Mr. Moore, and Mr. Walker described the occurrence of division figures in cancer which possessed all the peculiar characteristics of the heterotype division—that is, the form of division in which the number of chromosomes was reduced to one half of the normal number found in the cells of the body. A diagram was shown which exhibited the results of an indiscriminate counting of the chromosomes in the dividing cells of malignant growths. This diagram when compared with one showing the results of a similar counting of the chromosomes in the cells of a testis proved that the relative proportions of cells containing the full and exactly half the normal numbers of chromosomes was almost identical in malignant growths and in testes. It was shown that "Plimmer's bodies," so frequently described by various authors as being the parasite of cancer, were exactly similar in origin, mode of development, and in structure to the archoplasmic vesicles found in the spermatids of certain animals, including all mammals, but never in any other normal cells of the body. Thus there was another direct parallel between the cells of malignant growths and those of normal reproductive tissue. Emphasis was laid upon the fact that cells that had entered upon the reproductive phase lived normally as parasites upon the parent organism and that all such cells, whether in animals or in plants, were out of coördination with the rest of the body. A true fusion between leucocytes and tissue cells was described as being one of the earliest phenomena in the commencement of malignant growths. Reduction in the number of chromosomes to one-half of the somatic (body) number was described as taking place normally among the leucocytes, thus making it probable that certain generations of leucocytes went through a sexual phase. The fusion between the tissue cells and leucocytes was elucidated in view of this fact. In any case it was probable that a hybrid race of cells, out of coördination with the parent organism, was produced. Mr. Walker pointed out that there were two reasonable deductions that might be made with regard to these observations. The malignancy of certain tumours might be due to the cells forming them entering upon a sexual phase and then living as a parasite upon the parent organism, as such cells always did. In this case it would be necessary to seek the cause or causes which induced this change. This left the leucocytic fusion in the position of a mere coincidence of no material importance. On the other hand, this fusion itself would equally account for the peculiar qualities possessed by the cells of malignant growths. They would necessarily be out of coördination with the parent organism and would live as parasites upon it. Moreover, that some of them should enter upon the sexual phase was exactly what would be likely to happen. Here it would be necessary to find out under what conditions the fusion between the leucocytes and tissue cells was possible. It might be due to some change in either or both of the two kinds of cells.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Treatment of Some Diseases commonly regarded as of Gouty Origin.—Acute Meningococcal Cerebro-spinal Meningitis in Young Children.

A MEETING of this society was held on Feb. 6th, Dr. J. O. AFFLECK, the President, being in the chair.

Dr. D. CHALMERS WATSON read a paper entitled "The Treatment of Some Diseases commonly regarded as of Gouty

Origin." The paper was based on a series of over 150 cases met with in private practice, in which the symptoms were of a nature usually regarded as "gouty." The conditions dealt with included migraine, "rheumatic" pains, recurring catarrh of a mucous membrane, and some vague and ill-defined symptoms often encountered after middle life. While admitting that the terms "gouty" and "goutiness" were unsatisfactory, Dr. Chalmers Watson refrained from defining the words "gouty origin." It sufficed to say that the cases considered by him belonged to a type which was, as a rule, by common consent of patients, practitioners, and consultants alike, regarded as of gouty origin. Illustrative cases were cited and in discussing this treatment consideration was given to the probable explanation of the value of (1) a restriction in the amount of animal proteid food; (2) measures directed to increase the functional activity of the liver, kidney, and skin; and (3) small doses of thyroid gland extract in cases not readily accessible to other forms of treatment. Dr. Chalmers Watson pointed out that the benefit which he had observed to result apparently from the use of thyroid extract used as a supplementary measure in troublesome cases lent some support to his view that the good effects obtained by merely restricting the amount of animal proteid food in many cases were due to the favourable influence of such a diet on the thyroid gland. Particular attention was directed to the function of the thyroid gland in neutralising toxic substances resulting from faulty digestion and assimilation of foodstuffs. Reference was made to Dr. Chalmers Watson's researches which showed that different diets induced, as a rule, different states of activity of the thyroid gland, the histological appearances clearly indicating that this gland was intimately concerned with the metabolism of a highly nitrogenous diet, such as meat, and also a diet containing excess of carbohydrates, such as bread. The fact that some cases of the kind under consideration were occasionally treated very successfully by means of an excessive meat diet (Salisbury diet) did not negative Dr. Chalmers Watson's view. In such cases it was reasonable to suppose that the degree of rest given to the thyroid gland (and other glands) by cutting off the carbohydrates in the food might enable the thyroid to regain its nutritive equilibrium. Dr. Chalmers Watson proceeded to compare the two diathetic conditions—gout and tuberculosis. Some antagonism between the two conditions had long been recognised and was supported by the relative infrequency of tuberculosis in carnivorous animals. The former was, in general, a disease of well-grown vigorous subjects, and in its treatment a restriction in the amount of animal proteid was of special value; the latter was, in general, a disease of less developed and less robust subjects, and in its treatment special value attached to the use of a great excess of animal food (zomotherapy). In a paper read before the Royal Medical and Chirurgical Society in 1904 Dr. Chalmers Watson submitted data obtained from an experimental investigation on gout in fowls, which suggested to him that the thyroid gland was more intimately concerned in both diseases than was at present believed. These data, coupled with his clinical observations, had led him to believe that the subjects of inherited or acquired gout had acquired from their environment—which included diet—a type of thyroid gland which was abnormally active and which worked, so to speak, at high pressure; whereas subjects predisposed to tuberculosis had an inactive thyroid glandular system. Reference was made to a recent paper by Lorand in which that author suggested that thyroid inadequacy was a factor in tuberculosis. Some scientific evidence in favour of Dr. Chalmers Watson's views was submitted in the form of a lantern demonstration of the effects of a meat diet in normal and in tuberculous fowls and also in rats. Attention was also directed to the modifications in the structure of the kidney, bone marrow, and osseous system in the offspring of meat-fed rats. Thereafter it was shown that similar modifications in structure and function were present in the human subject, this being demonstrated by sections of the thyroid gland and osseous system of an infant, aged 16 months, whose mother, a tuberculous subject, had been fed for a prolonged period prior to, and during, gestation on an excessive meat diet, in which the clinical picture during life indicated to Dr. Chalmers Watson that the symptoms, which were otherwise obscure, were the result of exhausted functional activity of certain organs, notably the bone marrow and thyroid gland, his diagnosis being confirmed by post-mortem examination. Reference was made to clinical facts, personally observed, which suggested that the diathesis of a tuberculous child could be favourably modified in the course of a few years by a diet containing an excess of animal proteid food. In two children under three years of age, in good circumstances, both weakly, anæmic, and typically tuberculous-looking subjects, with very pronounced family history of tuberculosis, the administration of a liberal diet of milk, cream, eggs, fish, bread, vegetables, and fruit, with in addition a quarter of a pound of raw meat juice daily for over two years, effected a radical change in the general appearance and conformation of the children. They became strong vigorous subjects, with well-developed muscles and high colour index of blood. After a little over two years' treatment one of the children was taken to Dr. Chalmers Watson with the complaint that of late so-called "bilious attacks" had developed and also that the child complained of tender feet, these being symptoms that were specially frequent in the children of gouty parentage. The treatment of gout and so-called goutiness should be prophylactic and begun in early life. Dr. Chalmers Watson concluded with some practical observations on the amount of animal proteid food which should be given to children. The following recommendations were made: (1) in the offspring of gouty subjects the amount of meat given should be small and little or no red meat must be given under six years of age; (2) in the children of tuberculous subjects the diet should, from the earliest periods, include a liberal supply of red meat, in appropriate form; (3) in cases of mixed diathesis, each case had to be treated on its merits; and (4) as the neuritic pains often seen in tuberculosis might have a striking resemblance to those seen in the arthritic diathesis, special care must be taken in the diagnosis before reducing the amount of meat in the diet.—Dr. WILLIAM RUSSELL said that the society was always generously appreciative of original work and many of the members had followed Dr. Chalmers Watson's experiments with interest. Although the experiments might be accepted as accurately recorded the deductions from them and the clinical contentions based upon them were another matter. One aspect of the experiments had been dealt with at the Pathological Society of London and he would not enter upon it. He would take up the question as it had been presented on this occasion from the clinical standpoint. Dr. Chalmers Watson had begun by referring to three classes of cases—classes well known to physicians—suggesting that the symptoms were due to altered thyroid action, as they had recovered under treatment part of which was the administration of small doses of thyroid. Had this been the only treatment the proposition would be established; but the other treatment was the reduction of proteid food, administration of laxatives, and Turkish baths. This treatment was that in common use with results quite equal to Dr. Chalmers Watson's. It was not a sound clinical contention that the result was due to thyroid. Dr. Russell's experience had been that thyroid made these cases worse if the other treatment was not used at the same time. The influence of thyroid on proteid metabolism was very remarkable—its absence arrested both physical and mental development as in cretinism, while its influence in myxœdema was fully known. The contention that the symptoms referred to commonly as gouty and so forth, and recognised as due to a dietary too rich in proteids, were really due to the effect of proteid upon the thyroid was a totally different matter, for in that connexion the existence of the carnivora had to be borne in mind as well as the existence of the Esquimo who lived almost entirely on flesh. Evidences of changes in the thyroid as the result of a free proteid dietary should not be difficult to obtain, did they exist; but when changes were more widespread and not confined to one organ the position changed entirely. The effect of the kind of food eaten was a very wide question. At one extreme there were the people who, like Haig himself, could not eat certain things without being poisoned and who were cured of their ailments whether they were called "gouty" or something else by a very austere dietary. Haig could advance thousands of cases in support of this; the mistake, however, was made when this experience became the basis of the contention that without this austerity there was no health. An excess of proteid food acted in various ways; it might cause constipation, leading to putrefaction and the absorption of toxins. This putrefaction took place even in well-digested proteid if it was retained for any time in the intestinal tract, and it was to the varied symptoms caused by this that the profession so commonly applied the term "gouty."

Dr. JOHN THOMSON read a note on Two Fatal Cases of Acute Meningococcal Cerebro-spinal Meningitis in Young Children. He said that the cases of non-tuberculous meningitis met with in the Children's Hospital had hitherto been divisible into three groups: 1. Occasional pyæmic cases secondary to disease of bone or other parts and due to streptococcus, staphylococcus, bacillus coli, &c. 2 Acute pneumococcus meningitis, secondary or primary. 3. Chronic or subacute posterior basic meningitis occurring in young babies, running a course of from three weeks to three or four months and due (Still) to a special diplococcus, now regarded by most authorities as practically identical with Weichselbaum's meningococcus. Within the last few months, and especially during the last week or two, a fourth group of cases had appeared for the first time. In these there had been symptoms of acute cerebro-spinal meningitis and the spinal fluid had shown typical meningococci both free and within the cells. The symptoms did not differ essentially in nature from those of ordinary posterior basic meningitis but were far more intense in degree, as if they arose from a much more virulent organism. For example, the general disturbance was much greater in every way, the spinal fluid was often so turbid as to resemble pus, the duration of the illness was measured by days instead of by weeks, and the average age of the patients was greater. Two cases were described. The first case was that of a boy, aged 3½ years, hitherto healthy; he was admitted on Oct. 6th, 1906, with vomiting, fever, and dyspnœa, which had lasted two days. His condition exhibited stupor, with stiff back and head retraction, and he resented being moved; there was no herpes or purpura. The temperature was 102° F. The heart, the lungs, and the abdominal organs seemed healthy. Kernig's sign was well marked; there was no strabismus or nystagmus; the knee-jerks were absent. On lumbar puncture the fluid showed numerous cells, mostly polymorph, and very numerous meningococci. An attempt to grow the organism failed. The child died on the evening of admission and two and a half days after the onset of the symptoms. The second case was that of a girl, aged two years and two months, who was admitted on Jan. 22nd, 1907. She had been ill for two and a half days. The patient was feverish, breathing heavily, and had slight cough, severe vomiting, and one fit; she had recently recovered from chicken-pox. On Jan. 20th the patient became drowsy and soon after began to vomit severely. On the 22nd head retraction became marked and she squinted. On admission she was somewhat cyanosed; there was no herpes or purpura; she lay on her side with marked opisthotonos and was very tender on movement. Her temperature was 98·2° F. The tongue was thickly coated. The mouth and throat were in a state of severe catarrh (a swab showed staphylococci only). The knee-jerks were normal. Kernig's sign was not present, the left conjunctiva was injected, and the patient was semi-conscious and very miserable, tossing about constantly. A lumbar puncture was made on Jan. 23rd. The fluid showed numerous cells, mainly polymorphonuclear, and numerous meningococci, many being intracellular. The blood examined showed hæmoglobin 82 per cent.; erythrocytes, 5,450,000; and leucocytes, 19,000. Over 70 per cent. of the leucocytes were polymorphs, immature polymorphs, and a few typical myelocytes were also present; there were no eosinophiles.—Dr. STEWART MCDONALD gave a pathological report on the cases. The post-mortem examination showed no cutaneous hæmorrhages. An acute leptomeningitis of the brain and cord was present. In the brain the exudate was vertical as well as basal. Meningococci were demonstrated in the exudate from the brain and cord. The organisms were typically Gram-negative. The other organs showed evidence of an acute toxæmia. There was no pneumonia. Histological examination confirmed the above appearances. The exudate on the brain showed little fibrin, numerous polymorphs, and large mononuclear cells. Many of the latter were vacuolated and degenerating, but many also were actively phagocytic towards the polymorphs. The organisms in sections were scanty. The heart showed cloudy swelling and some acute interstitial myocarditis. There were cloudy swelling and fatty change in the other organs. Films from the cerebro-spinal fluid removed during life showed great excess of polymorphs with large numbers of typical meningococci, many showing involution forms. Cultures were obtained from this fluid of typical meningococci, but Gram-positive forms of the organism appeared in the culture and in sub-cultivations the organism had become strongly Gram-positive. On one cultivation on serum agar pointed diplococci very like pneumococci appeared, and at one time it appeared as if two organisms were present. In subsequent cultivations, however, the typical shape of the meningococcus was regained though the organisms were strongly Gram-positive. Dr. McDonald was of opinion that he was dealing with a pure culture of meningococcus and was confirmed in his opinion by the observation of a similar alteration in the staining character of the organism in another more recent fatal case in the Children's Hospital. The two contributors were of opinion that bacteriologically posterior basal meningitis and acute cerebro-spinal meningitis were identical, only differing in degree, and suggested that attenuated meningococci might exist in the nasal or other secretions in many children, just as attenuated pneumococci might, and that, under certain conditions, the meningococci might become more virulent, giving rise to posterior basal meningitis, or still more virulent, giving rise to the acute epidemic form of the disease.

Dr. WILLIAM ELDER read notes on Cerebro-spinal Meningitis. After giving details of five cases treated in Leith Hospital, he said that there could be little doubt that acute cerebro-spinal lepto-meningitis existed in Leith in its so-called epidemic form. In all the cases the presence of a diplococcus was demonstrated in the cerebro-spinal fluid and it had been cultivated and examined in these cultures. In the fatal cases post-mortem examination demonstrated a typical purulent cerebro-spinal lepto-meningitis. The symptoms generally were best described as being a very acute and marked exaggeration of those seen in ordinary tuberculous meningitis. The onset was much more acute and the irritative symptoms were more marked. The onset was often very sudden; thus a person might be well in the morning and unconscious in the afternoon. There was great restlessness and the patient cried out piercingly when touched. Convulsions were not always present; the respirations were usually about 30 per minute and often jerky; the pulse was always rapid, from 140 to 180, and the temperature was from 100° to 104° F. The want of relationship between the temperature, pulse, and respiration, as was seen in pneumonia, was a feature of the disease. Purpuric spots might or might not be present, the patient perhaps dying before their eruption, and thus the term "spotted fever" was a bad one to apply to the disease. The only sure means of diagnosis was lumbar puncture. The fluid drawn off was usually turbid and escaped as if under pressure. Usually two test-tubes full could be obtained. The deposit after centrifuging was stained by Jenner's, carbol-fuchsin, carbol-thionin, or other stain and examined. The typical diplococcus of Weichselbaum could then be seen around the nuclei of the polymorphs. In Dr. Elder's first case, which was thought to have been a sporadic form of lepto-meningitis, an organism was found having all the characters of the pneumococcus. It was very slightly larger than the organism found in the later cases and although present in some of the cells, the greater number by far were extracellular. They stained by Gram's method very distinctly. Dr. Elder did not think that this case should be placed in another class because of this difference. Clinically the cases were indistinguishable. This first case recovered and so did one of the later, and their post-recovery condition was very similar, both being weak and emaciated, one had lost her hearing, while the other was blind. The question of there being two separate organisms was not at all settled and a probable explanation was that they were one and the same organism only slightly modified. The later cases showed that the meningococci differed in size though they did not stain by Gram's method. Dr. Elder suggested that the pneumococcus and the diplococcus intracellularis were closely allied, if not actually the same organism, and that as they had always sporadic cases of pneumonia and occasionally epidemics of pneumonia so there appeared to be sporadic cases of cerebro-spinal meningitis in a community for at least some time before the disease became epidemic. Almost all the cases had a cough, indicating bronchial irritation, and in the fifth case catarrhal pneumonia was present and the secretion from the smaller bronchi was full of the typical organism. No cultures could be obtained from the blood. There was no evidence to show that the disease was infectious in the ordinary sense. The cases came from all parts of the overcrowded and insanitary neighbourhoods. No two cases had been from the same house or tenement. As regarded treatment

two of the five cases recovered and both were injected with Dr. Rienzi's antipneumonococcic serum. A distinct improvement was noted after each injection. The patient slept and the temperature fell considerably, sometimes below the normal. Even though the temperature rose again the patient was not worse and the pulse was stronger. Dr. Elder knew of no disease which in its severe forms was so rapid and so hopeless. Lumbar puncture always seemed to relieve the patients as did also saline injections. To quieten the restlessness no drug was so useful as morphine. Stimulation by digitalis, strophanthus, and brandy often caused marked rallying. Rectal feeding had to be employed, the head retraction being so pronounced as to prevent swallowing.—Dr. J. CRAUFURD DUNLOP stated that the first case in Glasgow was reported in May, 1906, and since then there had been 213 deaths in that city. In Edinburgh the first death was reported in October and up to the end of January there had been eight deaths from cerebro-spinal meningitis. In Dundee there had been one death; Aberdeen, one; Paisley, five; and Leith, two. From May, 1906, to Jan. 31st, 1907, there had been 57 cases distributed as follows: Banff, one; Campbeltown, one; Coatbridge, three; Eastwood, two; Falkirk, five; Govan, 11; Partick, two; Kilmarnock, four; Newmonkland, four; and Shettleston, 24. Of 230 deaths which had occurred in the principal towns from May, 1906, to the end of January, 1907, 115, or 50 per cent., were under five years of age; 94, or 40·8 per cent., were from five to 20 years; and 21, or 9 per cent., from 20 to 60 years.—Dr. EDWIN BRAMWELL said that he had seen seven cases in Edinburgh and Leith and some 40 cases in Glasgow. All degrees of severity were found in the cases and in his opinion it was impossible to distinguish clinically between cases of posterior basal meningitis and cerebro-spinal meningitis.—Dr. J. S. FOWLER said he had had five cases of cerebro-spinal meningitis under his care; one ended acutely; four lasted from three to four weeks. Persistent vomiting was a constant feature and later stiffness of the back and neck, but head retraction was not a conspicuous sign. He had employed 1 per cent. of lysol as an antiseptic injection and also 1 per cent. collargol, but the latter was not successful and had produced delirium in one case.—Dr. HARRY RAINY narrated an interesting case of a woman, aged 50 years, who had been found unconscious but with rigid limbs leaning against a wall. She was admitted to the Royal Infirmary but died on the third day after her admission. A lumbar puncture revealed the presence of meningococci.—Dr. WILLIAM RUSSELL referred to the prevalence of meningitis of various kinds; he had seen six cases, two outside the infirmary and four inside—one only had recovered. He asked for a clear statement from the bacteriologists present with regard to the similarity or dissimilarity of the meningococcus and the pneumococcus.—Dr. W. T. RITCHIE and Dr. STEWART MCDONALD spoke and maintained that the two organisms were different; the latter further contended that in one of his cases the organism showed a striking variation.

SOCIETY OF ANÆSTHETISTS.—A meeting of this society was held on Feb. 1st, Dr. R. J. Probyn-Williams, the President, being in the chair.—Dr. Leonard G. Guthrie read a paper upon Poisonous After-effects of Chloroform and Ether. Dr. Guthrie briefly summarised the literature of the subject and then gave a carefully reasoned explanation of his own view of the causation of these phenomena. He attributed the symptoms described in his own and other like cases to acute fatty acid intoxication and held that as the amount of fatty degeneration present post mortem in such cases cannot be attributed solely to the often small amount of anæsthetic inhaled, therefore there must be some pre-existing fatty change in the subjects which rendered them susceptible to fatality when the effect of the anæsthetic was superimposed upon that faulty state. Dr. Guthrie referred to the conditions which clinically resembled these cases, such as the cyclic vomiting of children, diabetic coma, and acute yellow atrophy of the liver. He also pointed out the probability that many mild cases of vomiting after anæsthesia were of a similar nature to the fatal cases. He described the recent observations upon the occurrence of acetonuria after anæsthesia induced by various agents, and finally he discussed the possibility of anticipating the likelihood of post-anæsthetic trouble and indicated the proper line of prophylaxis where such anticipation was possible, and the treatment for the symptoms when they actually arose.—Dr. William Hunter said that he was interested in these cases from the point of view of liver disease and from the point of view of chloroform poisoning. As regards acute yellow atrophy, although the clinical manifestations were similar, yet he regarded the post-mortem changes in the two kinds of cases as being quite distinct. There was an amount of necrobiotic change in the cases of acute yellow atrophy both in the liver and in the kidney that was not in the least paralleled in the post-chloroform deaths. As regards the aspect of these cases as due to chloroform, if that theory were right and the changes were caused by a diffusible stimulant poison then there was strong suggestion of some similar diffusible poison being at work also in the other instances which were clinically similar, but in which there was no question of chloroform influence. He believed that in the case of all poisons the question of idiosyncrasy was no mere refuge of the destitute as an explanation. He was certain that dogs, for instance, displayed such an idiosyncrasy towards chloroform.—Dr. H. D. Rolleston was interested in this subject from its relation to liver disease and to the question of acid intoxication. Dr. Guthrie's thesis was that chloroform induced further fatty metamorphosis of the liver in cases where that organ was already in a fatty condition, that the accumulations of fat gave rise to acid intoxication, and that this was responsible for the symptoms. Dr. Rolleston admitted that chloroform, like alcohol and iodoform, could produce fatty liver, but he interpreted the sequence of events differently in these cases of poisoning after chloroform. He believed that probably the liver changes were secondary to the fatty acid intoxication caused by the action of chloroform on the fats of the body generally. The action of poisons like those present in acidosis and chloroform so impaired the vitality of the liver cells that pathological fatty infiltration was able to occur. In favour of the view that the fatty liver was not the cause of the fatty acid intoxication he drew attention to the case of diabetic coma—the commonest example of acid intoxication—in which the liver was not nearly so excessively fatty as in these chloroform cases. Dr. Rolleston further laid stress upon the effect of starvation due to the abstinence necessary before operations and to the further abstinence and sometimes vomiting afterwards. He thought that females were more easily susceptible to acidosis than males and this point had been remarkably emphasised in observations he had made upon cases of gastric ulcer.—Dr. Dudley W. Buxton said that it was hard to criticise a paper which, like Dr. Guthrie's, looked at all sides of the question. He referred to the experimental production of fatty changes by chloroform administration which was effected both by giving animals weak dosage over prolonged periods and by administering one excessive amount. Such changes did not occur as the result of therapeutic dosage. He objected to the term chloroform poisoning because it was not yet proved that the symptoms were due to chloroform at all. How many very fat people were exposed to long administrations of chloroform without suffering after-effects at all? He thought that probably the kidney was at least as responsible as the liver in cases that ended fatally. No stress had been laid in the history of cases related upon the strength of vapour given; yet all anæsthetists realised the effect that a high percentage vapour had upon protoplasm as compared with the comparatively innocuous nature of a low one.—Dr. J. W. McCardie regretted that in the cases under discussion there was no clinical record of the depth of anæsthesia employed. He referred to the way in which the cases seemed to pertain to particular hospitals. He also mentioned that two had occurred after confinement.—Dr. R. T. Bakewell had not seen one of these cases during 15 years' experience at a children's hospital.—Mrs. F. M. Dickinson Berry, although working at a hospital where the circumstances of the children patients were in accord with those described by Dr. Guthrie as likely to result in fatty liver, had not yet seen one of these cases; nor had there been one in 16 years, she believed.—Dr. Sutherland said that much advance in their knowledge of acid intoxication had been made since Dr. Guthrie's original paper. The symptoms were clinically identical in cyclic vomiting, post-chloroform poisoning, salicylic poisoning, uncontrollable vomiting of pregnancy, and acute yellow atrophy of the liver. In the cases in question Dr. Sutherland did not regard chloroform as the direct toxic substance producing the acidosis, but he thought that the effect of chloroform was to remove some check action from metabolism, thus allowing of fatty degeneration. The whole of the changes might take

place after the administration. As regards idiosyncrasy he thought that this term was only applicable when the same peculiarity was shown whenever the same drug was employed. In these cases there had several times been inhalation of chloroform without peculiarity in cases where later the peculiar and fatal symptoms had arisen on another inhalation. Cases had been related to him as having occurred at the hospital where Dr. Bakewell had heard of none.—Mr. Harvey Hilliard found it hard to understand that there was no relation between the amount of chloroform and the effect produced.—After remarks from the President Dr. Guthrie replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 6th, Mr. E. Powell, the President, being in the chair.—Mr. J. Mackie showed a patient whom he had treated by operation and x rays for Sarcoma of the Pharynx. When first seen 16 months ago the left tonsil, pharyngeal pillars, soft palate, and posterior third of the tongue were involved in growth, practically the whole area of which was ulcerating. The cervical glands on the left side were involved, one standing out larger than a walnut. Treatment by x rays was at once begun and a rapid improvement immediately followed. In less than two months the pharynx was healed but there was no improvement in the glands and an extensive operation was performed for their removal. There was a slight return in the pharynx some two months after and x ray treatment was again carried out with satisfactory results. Since then there had been no further return and the pharynx had now been healthy for six months.—Dr. W. R. Smith (Beeston) showed a specimen of soft rapidly growing Carcinoma of the Breast from a female, aged 50 years, and forming a tense semi fluctuating mass before removal. The pectoral muscles and axillary glands were removed in one large mass; this was not difficult as the growth was practically encapsuled. Dr. Smith also showed a specimen of Ovarian Dermoid Cyst removed from a patient, aged 46 years, and containing teeth, hair, and skin. The uterus was removed at the same time for fibroma. The patient then made an excellent recovery.—Dr. C. H. Cattle read a paper entitled Some Remarks on Typhoid Fever. The first case related was that of a woman, aged 27 years, who in the third week of the fever suffered from suppurative parotitis and double optic neuritis. The rarity of the latter affection in typhoid fever was commented on and a report on the condition of the eyes by Mr. W. G. Laws was read. There was much effusion with hæmorrhages on both discs, the papilla being raised at least one millimetre. For some days vision was almost, if not quite, abolished. The swelling was massive and had the "choked-disc" appearance. Although this was suggestive of increased intracranial pressure the symptoms did not indicate the existence of meningitis. The patient made a good recovery with $\frac{5}{6}$ of vision in the left (the better) eye. She could see to do her housework and find her way in the streets in the day time. Altogether the paper dealt with the cases of 40 patients who had been treated during the past 12 months, with six deaths, equal to 15 per cent., but of these four lived less than five days in hospital and were moribund when admitted. Of the two other fatal cases, one was in a healthy young man, aged 18 years, who after a mild primary attack died from exhaustion during a relapse occurring after the temperature had been normal for over a fortnight and the patient had been up and dressed. The other fatal case was in a woman, aged 30 years, who died from perforation in the third week. No operation was done as her condition seemed too bad for surgical interference to offer any hope. Nevertheless, the opinion was expressed that operation ought, as a rule, to be performed as offering the only chance of recovery, which occurs in 30 per cent. of such cases. Allusion was made to the practice of giving far less alcoholic stimulant in typhoid fever than was the case 20 or even 15 years ago. In the above series of cases more than three-fourths of them received no stimulant at all.—The paper was discussed by the President, Dr. T. Henderson, Dr. A. B. Dunne, Dr. F. H. Jacob, Dr. J. H. Thompson, and others, and Dr. Cattle replied.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 30th, Mr. H. Shirley Jones, the President (Droitwich), being in the chair.—Dr. C. W. Buckley (Buxton) introduced a discussion on the Influence of Climate on Gout and Rheumatism. In gouty patients who were fairly robust and without high arterial tension or arterio-sclerosis a bracing climate was desirable; humidity should be low and the temperature fairly equable. In cases with high tension a more relaxing climate was best and inland climates were generally better than marine. The south-eastern counties showed a remarkable excess of gout in comparison with other parts of the country, partly explained by the class of population and perhaps partly by the chalky character of the water. Acute rheumatism was not affected by climate except so far as unfavourable climatic conditions might lower the resistance of the system to infection. Muscular rheumatism and kindred conditions which were best described as fibrositis were unfavourably influenced by a high humidity, and especially by a damp soil, but temperature was of less importance, equability being more essential than warmth. As to sending the patient abroad in cases of rheumatoid arthritis the desirable combination of warmth, equability, and low humidity was hardly attainable in this country, though low humidity was still the most important factor. Probably the best climates in this disease were those of Grand Canary, Teneriffe, and Bermuda.—Dr. J. Groves (Isle of Wight) expressed general agreement with Dr. Buckley's views and pointed out the untrustworthiness of statistics in determining the effect of climate upon the diseases in question.—Dr. Percy G. Lewis (Folkestone) held strongly the view that chalk in drinking water had nothing to do with the causation of gout. Gout and rheumatism were considerably more a matter of the habits of individuals than of the climate in which they happened to reside.—Dr. C. Begg (Bath) thought of climates as divided for clinical purposes into two classes, (1) the bracing, and (2) the relaxing or sedative, and his principle of applying them to cases was that which governed his administration of stimulants. When he would use malt liquors and nourishing port he advised a sedative climate to build up a reserve force; and when champagne and spirits he recommended a bracing one to influence the metabolism.—Dr. Leonard Williams (London) considered that goutily disposed people were better in bracing climates, but that those with definite gouty manifestations in the kidneys or arteries ought never to be sent to bracing climates but always to relaxing ones.—Dr. W. J. Tyson (Folkestone) said that until they knew more about the etiology of rheumatism they must adopt such clinical methods as had been found more or less useful, such as a dry climate, as much sun as possible, and attend to the general laws of health as regards clothing, proper ventilation, and suitable foods.—Dr. J. T. Leon (Southsea) thought that gout, apart from renal changes, was little affected by climate. In Southsea arthritic patients generally did well owing to the equable climate.—Dr. F. G. Thomson (Bath) said that during a residence in Oporto among a community where port wine was freely indulged in he was struck with the comparative rarity of gout, both acute and chronic. This he attributed largely to the effect of the warm climate causing constant free action to the skin. He considered warmth of locality to be an important factor in the climatic treatment of gout.—Mr. G. H. Thompson (Buxton) said that year after year he noticed many gouty patients went to Buxton from the south-eastern counties, many of whom complained of the chalky water. He noticed that many cases of "rheumatism" came from certain humid districts, from valleys, from river districts, from the fen district, and from Ireland.—Dr. F. J. S. Heaney (Blackpool) said that Blackpool and district had a climate of high average humidity and a very low mean temperature; the country around was flat and winds constantly prevailed. Chronic rheumatic arthritis occurred with great frequency, but acute rheumatism was almost unknown there, owing to the fact that in a frequently renewed atmosphere acute rheumatism, like other infective diseases, was less likely to occur. Gout was very rare indeed on the west coast of Lancashire.—Dr. Buckley replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 1st, Mr. L. A. Bidwell (in the unavoidable absence of the President, Dr. L. P. Mark) being in the chair.—The following pathological specimens were shown:—The President: Drawings from specimens of Cancer of the Tongue.—Dr. J. A. Coutts: (1) Congenital Malformation of the Heart; and (2) Sarcoma of the Bladder.—Mr. J. G. Pardoe: (1) Calculi in Both Kidneys and Ureters; (2) Malignant Growth of Bladder invading Iliac Vessels; and (3) Malignant Hypernephroma.—Dr. David Arthur: Skiagraphs and Othrodiagraphic Tracings of Cases of Aneurysm and Heart

Disease.—Mr. Cecil H. Leaf: Cyst of the Breast with Intracystic Growths.—Mr. Aslett Baldwin: (1) Appendix containing a Mulberry Calculus; and (2) Large Gall-stone causing Intestinal Obstruction.—Dr. J. M. Bernstein: Tissues invaded by Bilharzia and other Specimens.—Dr. G. Norman Meachen: Microscopic specimens of Leucotrichia Annularis (Ringed Hair).—Dr. A. Eddowes: Microscopic specimens of Diplococci of Denne and Dahnhardt.—Mr. E. H. Shaw: Carcinoma of Testis with Secondary Deposits in Glands and Liver.—Specimens were also shown by Mr. H. P. Dunn, Dr. G. C. Low, Dr. J. H. Dauber, Mr. F. Lionel Provis, Mr. Chisholm Williams, Dr. H. Macnaughton-Jones, Dr. E. F. Travers, and Dr. H. G. Adamson.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 25th, Dr. J. Lindsay Steven, the President, being in the chair.—Mr. J. A. Campbell read a paper on the Opsonic Index, with a demonstration on the technique. Normal variations, he said, ranged from 0·9 to 1·2. In tuberculous subjects variations between 0·2 and 2·8 were met with and in individual cases the opsonic curve might range from 0·5 to 1·6. Chronic cases he considered most suitable for vaccine treatment. The inoculations were repeated when the positive phase was beginning to wane. The object aimed at was the production of a continuous positive phase. Notes on cases successfully treated were read; in one, a case of cystitis, the improvement was remarkable.

Reviews and Notices of Books.

Climatotherapy and Balneotherapy: the Climates and Mineral Water Health Resorts (Spas) of Europe and North Africa. Being a third edition of "The Mineral Waters and Health Resorts of Europe" much enlarged in respect to medical climatology, by Sir HERMANN WEBER, M.D. Bonn, F.R.C.P. Lond., and F. PARKES WEBER, M.D. Cantab., F.R.C.P. Lond. Edited by F. PARKES WEBER. London: Smith, Elder, and Co. 1907. Pp. 833. Price 15*s.* net.

THIS well-known work, the best exposition in the English language of the large and somewhat ill-defined subjects of climatology and balneotherapy, now appears in a much enlarged and, we presume, more or less final form. "The present volume," we are informed in the preface, "is not only a third edition of the 'Spas and Mineral Waters of Europe,' first published in 1896, but is also a modern edition of Hermann Weber's 'Climatotherapy' and likewise is practically a new edition of the greater portion of Parkes Weber's contributions to the volumes on Climatology mentioned above"—viz., "A System of Physiologic Therapeutics," published by Messrs. P. Blakiston, Son, and Co. of Philadelphia. Part I. contains two preliminary chapters on the general matter of medical climatology and a general account of the climatic health resorts of Europe and North Africa, together with a chapter on Ocean Climates and Sea Voyages. Part II. deals with the general subjects of hydrotherapy and balneotherapy and contains a description of the principal mineral water resorts or spas. Part III. is devoted to the selection of health resorts and therapeutic methods and their various uses in the different chronic diseases and morbid conditions.

We can unreservedly commend this work for the fulness and accuracy of its information, the sobriety of its tone, its practical value, and the absence of any trace of partiality or bias. It will be admitted that the literature of climatology and balneotherapy is too often deficient in these fundamental requisites. Sir Hermann Weber and Dr. Parkes Weber are safe guides in a somewhat difficult field of medical theory and practice and their work will not be soon rivalled, still less superseded. The present edition is brought thoroughly up to date and is fully representative of existing knowledge.

On the vexed question of sea voyages for consumptive cases the authors write as follows: "In the milder and quiescent forms of pulmonary tuberculosis sea voyages are often useful, provided that the patients be otherwise suited for life on ship. In the case of male patients with a liking for a life at sea, who are otherwise strong or of an originally strong constitution and who have become consumptive from 'chance' infection, or when weakened by overwork, mental worry, bad hygienic conditions, or acute diseases, long voyages are to be preferred to all other methods of treatment." According to the authors sea voyages are contra-indicated in the following conditions—viz., when they cause continued tendency to seasickness and when the diet on board leads to persistent loss of appetite, in cases of great general weakness, in all severe diseases of the heart and blood-vessels, in most advanced cases of tuberculosis, in great tendency to hæmoptysis, in epilepsy, in tendency to maniacal attacks and in periodic insanity, where there is a tendency to suicide, when the glare on the sea cannot be borne and in inflammatory conditions of the retina, and in the rare cases where a sea trip causes sleeplessness.

The climate of the Riviera is commended for persons of originally weak constitution and those whose powers of resistance have been temporarily or permanently weakened by previous diseases, injuries, or old age; also for ordinary cases of chronic pulmonary tuberculosis, catarrhal conditions of the respiratory organs, the remains of pleurisy in feeble persons, and many chronic affections associated with deficient powers of reaction. Nervous, excitable patients, and cases of dry catarrh of the respiratory organs and laryngeal irritability are unsuited for the Riviera. Patients requiring a special amount of shelter should select the east bay of Mentone or Beaulieu, while Sir Hermann Weber thinks that San Remo is specially suitable for chronic rheumatic subjects. Egypt is recommended for the following cases—viz., various forms of albuminuria and chronic renal disease and convalescence from acute nephritis, chronic bronchitis and emphysema, bronchiectasis, and chronic catarrhal conditions of the respiratory passages; convalescence from acute pulmonary and other diseases in individuals who cannot stand cold and high stations; many cases of rheumatoid arthritis, chronic gout, and sciatica; and persons who need a warm sunny climate and mental recreation. Persons suffering or convalescent from diarrhœa or dysentery should not resort to Egypt.

Biarritz, we are informed, "is well suited to patients requiring a moderately bracing and cheerful place, less exciting than the drier resorts on the Riviera; but it is too windy for cases of pulmonary tuberculosis and serious invalids." Arcachon is recommended in irritable pulmonary cases. Davos is spoken favourably of as a resort for consumptives, while St. Moritz is recommended rather for persons free from organic disease who, owing to overwork or other causes, require a holiday during winter in a sunny, very bracing resort. The other winter resorts in the Alps which the authors specially commend are Leysin, Montana, and Les Avants. A little more prominence might be given to Château d'Oex and Adelboden as winter resorts. Thorenc, a new summer resort situated at an altitude of nearly 4200 feet in the Alpes Maritimes, is recommended as "the best climatic summer resort in the south of France." It can be reached in five and a half hours from Cannes and in six and a half hours from Nice. Pau is mentioned as "suitable for erethic constitutions and for catarrhal conditions of the respiratory passages with dry irritable cough." We have not space to follow the authors in their descriptions of the various German, Austrian, Hungarian, Roumanian, and Russian health resorts, which are remarkably full and comprehensive.

As regards the home resorts the authors say: "The relative mildness of their climates has caused Hastings and St. Leonards to become best known as winter resorts and to be somewhat neglected during summer. The winter is,

however, less mild and colder than at Ventnor and the south-western winter resorts, which are preferable for weaker constitutions." Bournemouth is "perhaps slightly less sheltered from cold winds than Ventnor or Torquay but its climate is more tonic and it has the advantage of pine plantations and a sandy soil." An interesting chapter is devoted to the "Capitals and Great Towns of Europe—Visits to Interesting Smaller Towns," and many of the hygienic problems arising in this connexion are judiciously considered.

The second part of the book is devoted to Balneotherapy and is marked, like the first part, by fulness of information, a judicial tone, and the absence of one-sided views or over-statements. The authors write very cautiously about the results of Nauheim bath treatment in heart disease, remarking that "there appears to be considerable danger of patients with heart disease and insufficient compensation, of such a severe character that treatment at home in bed is absolutely necessary, being injudiciously recommended to try the Nauheim treatment." In suitable cases (there is much virtue in this cautious phrase) the results of the treatment are held to be satisfactory. The views of Sir W. Broadbent, Dr. Alexander Morison, and others are dealt with in this connexion.

We have not space to consider further the large amount of valuable material contained in this excellent work. As already mentioned, it leaves nothing to be desired as regards fulness of information, accuracy in detail, and fairness of tone. Now and again, however, we should welcome a more definite opinion from the authors on some of the many interesting problems arising in the course of the work.

Second Appendix to Squire's Pocket Companion to the British Pharmacopœia. London: Squire and Sons. 1906. Pp. 125.

THE Pocket Companion was published in July, 1904, and so rapid is the growth of medical and pharmaceutical literature that it was found necessary to issue a first appendix in July, 1905, and now the second appendix gives a *résumé* of what has been written on these subjects to the end of October, 1906. The Appendices are presented gratis to members of the medical profession on application and thus save both the production and the purchase of new editions at short intervals. The present Appendix is divided into three sections and the utility of the division is favoured by frequent cross references. The first section deals with "medical and pharmaceutical topics" and includes information derived from various medical, pharmaceutical, and chemical journals relating to the composition and actions of remedies, both new and old. Thus, in the first few pages will be found references to carbolic acid, formic acid, aconitine, adrenalin, and æsculin, while a little later come a few notes which refer to the principal changes in the new pharmacopœias of the United States, of Spain, of Austria, of Belgium, and of Holland. Reference to this first section will frequently be of service to those who wish to refresh their memory.

The second section is concerned with "specialities" and it is natural that this section should give prominent mention of the special preparations of Messrs. Squire and Sons. In addition to the "elegant pharmaceutical preparations" this section includes references to the "Companion" and the "Pocket Edition of the Companion" and illustrations of gynecols, sterilettes, and various instruments for the employment of gelatin, of formic aldehyde, and of suprarenal extract. This section introduces many new names of remedies but the information afforded suggests that some of these are really old friends and that a little more candour might have aided their identification. The concluding section is difficult to define under a single comprehensive term. In the preface it is stated to deal "with subjects bearing a special interest to members of the medical profession." It relates to the weights and measures of the British Pharmacopœia, to the metric equivalents of Imperial weights and measures, to solubilities, and to a comparison of the chief standardised potent preparations of the British, United States, and German pharmacopœias. To the specialist this section contains a great deal of material for speculation but it may be doubted whether members of the medical profession will care much about the merits of a controversy on degrees of solubility when carried to the second place of decimals.

A Short Practice of Medicine. By ROBERT A. FLEMING, M.A., M.D. Edin., F.R.C.P. Edin., F.R.S. Edin., Lecturer on Practice of Medicine, School of the Royal Colleges, Edinburgh; Assistant Physician, Royal Infirmary, Edinburgh. London: J. and A. Churchill. 1906. Pp. 748. Price 10*s.* 6*d.*

THE idea of Dr. Fleming in writing this text-book has been to provide for students a manual especially suitable for them to study whilst attending lectures on medicine. He maintains that medical science having made such strides in the "direction of specialism and along the lines of every system," the time must come when students attending a class in general medicine will be armed with a text-book giving the general outline of each individual disease. Thus only special points, clinical cases in illustration, and hints on treatment will be left to be written down. Further, Dr. Fleming urges that the student burdened with innumerable classes demands some guide as to what is necessary and what is unnecessary for the all-important examinations which lie before him and in this volume he tries to provide such a guide. The natural tendency for a student is to trouble himself with only the knowledge necessary for him to pass the requisite examinations and he is rather prone to neglect the information which will be of especial value to him in subsequent practice but which may not be required of him in an examination, such as the treatment of minor ailments and the management of the numerous aches and pains so frequently met with but which cannot be adequately described in the smaller text-books. We do not think, therefore, that students should be encouraged to content themselves with the study of those volumes intended for examination purposes only. In order to refresh their memories, however, a few weeks before the trial the use of such a manual is justifiable and in this respect Dr. Fleming's work will be found quite satisfactory.

The descriptions are necessarily rather brief but the author has contrived to condense a large amount of information into a comparatively small space. The literary style is distinctly pleasing and the type is good and not trying to the eyes. The most modern classification of diseases has been adopted and we especially recommend to the attention of our readers the sections on Diseases often grouped as Constitutional Diseases and on Diseases of the Nervous System.

Poisons: their Effects and Detection. By ALEXANDER WYNTER BLYTH, M.R.C.S. Eng., F.I.C., F.C.S., and MEREDITH WYNTER BLYTH, B.A., B.Sc., F.I.C., F.C.S. Fourth edition, thoroughly revised, enlarged, and re-written. With tables and illustrations. London: Charles Griffin and Co., Limited. 1906. Pp. 772. Price 21*s.* net.

COMPARING this volume with the previous edition, we find that the statement that it contains more information is justified in several particulars, while the bulk of the volume is not sensibly increased owing to the expansion of the subject in certain directions being compensated for by the omission of out-of-date processes and tests and by the condensation of sections which are of less importance than

formerly. In a modern work on poisons we should expect to find chapters on the methods recently devised for the better detection of poisons as well as on the nature and characteristics of new poisons, and in this respect Messrs. Blyth's contribution is on the whole not disappointing. Their definition of a poison, even in view of recently acquired knowledge, still holds good and is perhaps better, as it is certainly less nebulous, than that proposed by Kobert. The definition of a poison in the present volume is that "A substance may be called a poison if it is capable of being taken into any living organism and causes by its own inherent chemical nature impairment or destruction of function." Such a definition, it seems to us, is commendably concise and clear and meets all examples of poisons at present known to us. Sulphonal, trional, tetronal, paraldehyde, somnoform, and veronal are included in the category of poisons, though antipyrin is omitted. Epinephrin, the active principle of the suprarenal gland, finds a place for the first time in the ordinary list of poisonous substances, and, of course, it is one of the most powerful poisons known by virtue of its extraordinary action in contracting the capillaries and arteries, death from an overdose—and an overdose is exceedingly small in amount—usually occurring from paralysis of the heart or from complete arrest of the respiratory process. We are told that epinephrin is not precipitated by the group alkaloidal reagents while it reduces Fehling's solution and ammoniacal silver solution. The addition of ferric chloride to the aqueous solution produces a characteristic green colour, but in a scheme for the detection of this poison obviously its physiological action would be the best guide as to its presence.

We think that the chapter on carbon monoxide might well have been amplified by references to Haldane's work on the subject and also to the very interesting cases of carbon-monoxide poisoning which have arisen out of colliery explosions. The tests given ignore altogether those suggested by Haldane for detecting the presence of even small percentages of carbon monoxide in air by means of blood solution. Since this colorimetric test is far more delicate and more suitable for quantitative estimations than any other known method when carbon monoxide is present in small quantity, an account of it might well have been included in a work directed chiefly to the detection of poisons. Yet the authors write: "The detection in air, if the carbon monoxide is in any quantity, is easy enough, but traces of carbon monoxide are difficult." The reaction between carbon monoxide and iodine pentoxide (iodine being displaced) is mentioned by the application of which it is said that good results may be obtained with as little as 0·C025 per cent. of carbon monoxide.

The chapter on the relation of toxic action to chemical composition and constitution is a welcome feature of the book. In the chapter on lead we can find no reference to the use of lead plaster in the form of pills for procuring abortion several instances of which have been reported in the medical journals during the past year or so. The chapter on arsenic, as might have been expected, has been extended owing mainly to the extraordinary attention which was given to the quest for methods for the accurate estimation of very small quantities of this poison during the epidemic of arsenical poisoning arising from the contamination of beer. It is in this chapter that we find the latest references to literature, some of the papers quoted having been written last year. The use of saponin for producing a frothy appearance or semblance of briskness in beverages is not mentioned.

As heretofore, the work will be valued chiefly by the analyst who has for a long time found it the best source of reference on the chemistry of poisons, their behaviour to certain reagents, and their extraction from organic masses with a view to identification. It supplies the details of a practical course in toxicology and on this account must still rank as a standard work.

The Röntgen Rays in the Diagnosis of Diseases of the Chest. By HUGH WALSHAM, M.A., M.D. Cantab., and G. H. ORTON, M.A., M.D. Cantab. London: H. K. Lewis. 8vo, pp. 80, with 18 plates and 22 illustrations in the text. Price 6*s.* net.

WE welcome this contribution to the literature of an important subject. The value of the x rays in the diagnosis of affections of the chest is now very generally admitted and this book should be in the hands of both physicians and radiographers. The former will find how much help is to be obtained in clearing up doubtful cases, while the latter will find it of great assistance in developing their technique along the proper lines. The work opens with a brief chapter on the apparatus and its management for this class of work. Chapter II. deals with the normal chest and the proper method for the systematic examination of a chest is clearly and fully explained. Chapter III. is devoted to pulmonary tuberculosis and emphasises the real need of a proper x ray examination in all cases where there is the slightest doubt as to the existence or extent of the disease. There appears to be no doubt that an x ray examination can show the presence of a lesion which is not discoverable by the ordinary methods of examination. Subsequent chapters deal with pleurisy with effusion, pneumonia, emphysema, pneumothorax, new growths, pericardial effusion, and thoracic aneurysm. In all these conditions it is clearly shown that they give rise to images on the x-ray screen which are characteristic and consequently give information which is of the highest importance.

The text is written in a very clear and straightforward manner, without any evidence of undue bias; in fact, the reader is impelled to think that the authors have recorded no more than they have actually seen. The plates and illustrations are reproduced in an excellent manner and are most instructive. A complete bibliography is appended. We can recommend this book to all those who are in any way interested in the study of diseases of the chest.

The Extra Pharmacopœia. Twelfth edition. Revised by W. HARRISON MARTINDALE, Ph.D., F.C.S., and W. WYNN WESTCOTT, M.B. Lond., D.P.H. London: H. K. Lewis. 1906. Pp. 1045. Price 10*s.* net.

THE eleventh edition of this valuable book was issued little more than two years ago and already the publication of several new standard works of reference and innumerable contributions in current literature have entailed an arduous task upon those engaged in revision. It is stated that nearly 250 pages have been added to this edition and careful examination shows that much has been done, both in deletion and in rearrangement, to find room for new material and to facilitate ready reference. The new issue of the United States Pharmacopœia, which became official in the United States in the autumn of 1905, has necessitated a large number of interesting additions. Foremost amongst these is the vexed question of standardisation, which of late years has furnished a wide field for investigation. In the British Pharmacopœia of 1898 there were many indications that there was a strong desire to standardise wherever possible but in the United States Pharmacopœia numerous new tests and processes for standardisation have been introduced and these are usefully reproduced in the volume under consideration. Other pharmacopœias, the Spanish, Austrian, Dutch, and Belgian, have been also laid under contribution and the desire to be fully abreast of current literature has led to the inclusion of "intelligent anticipations" of the

new French Codex which is yet to come. For the convenience of the reader a long list of new monographs is given on p. viii. Many are already in general use, others are rather in the position of candidates for public favour, and there are only comparatively few of which the modern practitioner can be content to remain ignorant.

It is impossible to attempt to summarise the vast scope of information covered in this volume; we may, however, mention that there is a section on bacteriology which includes the most recent advances of this important branch of study; there is a section on organotherapy which is a subject which in certain quarters still attracts much attention; and it is perhaps needless to say that under the heading of Antitoxins the latest views on opsonins are described. An Extra Pharmacopœia of necessity deals with the newest suggestions for the advance of therapeutics and we must not expect too much in the way of guidance. The principle adopted, as in former editions, is to give references to the original sources of information and to indicate the conclusions in the briefest way. These features have earned for this manual a well-merited reputation and the new edition will doubtless be consulted by all who desire information relating to recent advances, as well as by those who still eagerly pursue the quest of the latest novelties. Those responsible for the present edition are to be congratulated on the general success of their labour. The effort to economise space in the index occasionally is a little confusing, since it has led to the frequent appearance of double entries in the same line.

Manual of Chemistry. By W. SIMON, Ph.D., M.D. Eighth edition. Thoroughly revised. London: Baillière, Tindall, and Cox. 1906. Pp. 643. Price 15*s.* net.

THE author is professor of chemistry in the College of Physicians and Surgeons of Baltimore and in the Baltimore College of Dental Surgery and is besides emeritus professor in the Maryland College of Pharmacy, appointments which are calculated to give him valuable experience as to the requirements of students of medicine, dentistry, and pharmacy when carrying out a course of chemistry. The book is both theoretical and practical, though the sections dealing with analysis are necessarily brief but they are sufficient, perhaps, for the special class of reader for whom the book is primarily intended, while they serve to indicate, should he intend to pursue the study further, the lines on which he should go. The fact that the book has reached its eighth edition shows that it is thoroughly appreciated and serves the aim intended by its writer, which is to furnish the student with a clear yet concise presentation of the science, an intelligent description of the substances which are of special interest to him, and a guide to laboratory work.

Space has been found for an excellent section on physiological chemistry, while metallurgy, chemical physics, volumetric analysis, and organic chemistry have received attention, briefly it may be, but still sufficient to help the student in principle and in practice. The author's observations on the nature of electricity afford an example of his power to present principles and facts clearly. Whilst dismissing any attempt to deal with the theory of electricity fully he is content to remark that the most recent view is that it is "a manifestation of some manner of strain set up in the hypothetical ether." "All methods of generating electricity bring about," he says, "a disturbance of the electrical equilibrium existing, under normal conditions, in all matter, and wherever this equilibrium is disturbed there is a tendency to re-establish it and it is during the process of re-establishing the equilibrium that work is done electrically." The definition of electric energy could hardly be put in simpler words than these. It is not a little interesting to find also that the author gives as one of the principal reasons why electrical phenomena have offered great difficulties to the investigator is that the electric undulations taking place in the ether, generally speaking, produce no effect whatever on our senses. Whilst waves of air in striking certain nerves in the ear produce the sensation of sound and other waves affect certain other nerves in such a manner as to produce the sensations of heat and light, man has no nerves that are affected by electric or magnetic waves. He is, so to speak, magnetically and electrically blind and deaf and "the slow development of the science of electricity was due to this fact." We imagine that this view has not occurred to many of us and we quote it as an example of the interesting and instructive way in which the author manages to touch upon so many essential points apparently outside the scope of the work but withal intimately connected with the main subject.

The book may be cordially commended to all those who must take up the study of chemistry in its relation to medicine and to the allied branches of dentistry and pharmacy.

Fables. By RONALD ROSS. Privately printed at the University (Liverpool) Press. Liverpool: Henry Young and Son. 1907. Price 2*s.* 6*d.*

UPWARDS of 20 years ago a young officer in the Indian Medical Service wrote a quite remarkable book. Like the first works of most writers it had received obvious inspiration from literary leaders in vogue, and the evidences of inexperience were not hard to find. But none the less "The Child of Ocean" was a striking romance, and more than one critic predicted for its author, Surgeon-Lieutenant Ronald Ross, an important future as an imaginative writer. It was decreed, however, that the budding novelist should win great distinction in other fields, and be called to a life where practical demands of the highest importance soon made it impossible for him to develop the delightful talent which he had displayed. But every man of letters will see that what Professor Ross has accomplished might well be foreshadowed by early skill in the weaving of romance. Readiness to follow inspiration, to give free rein to fancy, and to choose original methods of procedure by intuition—this readiness makes up much of the spirit which leads one man to discover useful scientific verities and another to write great works of imagination; and those who 20 years ago were prepared to predict that more would be heard of Ronald Ross as a novelist made no such very bad prophecy, although a totally different event has occurred. The Fables which have just appeared from Professor Ross's pen were written between the years 1880 and 1890, and belong some of them, therefore, to the period of his earlier literary effort. They show the author to be possessed of considerable metrical skill, much poetic insight, and an almost over-vigorous power of irony. They were written for children, but the children who could enjoy them thoroughly would, we think, be a little more sophistical than was good for them. True, children may love the fun without realising the rather cynical lessons of life that are inculcated, and as nowadays children's books are very generally enjoyed by their parents, perhaps Professor Ross, with the gift of being previous that he has displayed so famously upon biological fields, had his eye upon the older generation when he wrote his fables for the younger. We recommend the book to children and their parents, and we may mention that all profits from the sale of the work, which was published as a more or less private sort of Christmas card, will be given by the author to the Greek Antimalaria Fund.

LIBRARY TABLE.

A Handbook of Legal Medicine intended for the Use of the Legal Profession. By WILLIAM SELLERS, M.D. Lond., Barrister-at-Law. Manchester: At the University Press. 1906. Pp. 294. Price 7*s.* 6*d.*—This volume forms one of a "medical series" published by the University of Manchester. As will be seen by the title the work is intended mainly for members of the legal profession. The author has successfully arranged the book in such a manner and with such explanations and illustrations as will make medical and surgical problems occurring in civil or criminal cases intelligible to barristers and solicitors practising in the law courts. In order to appreciate fully the numerous technical points which may arise in medico-legal cases a certain acquaintance with medical facts and terms is essential. Dr. Sellers has therefore devoted a certain amount of space to elementary anatomy, in which the distribution of the principal blood-vessels and nerves is explained, and a brief description is given of the skeleton and of certain muscles. At the end of the volume an explanation is given of medical words in common use. The author does not claim more for his "handbook" than that it contains a collection of the facts of medical jurisprudence compiled from the recognised text-books. As such we can commend it to members of the legal profession. The principal points are well indicated, and a study of its pages should prove a great help in preparing a case to be brought before the courts in which medical evidence will have a prominent place.

Dragon and Coronet: A Poem founded on an Ancient Chinese Play. By FAITH PHILPOT LAURENCE, M.B., Ch.B. Edin. Singapore: Kelly and Walsh. Pp. 195.—Oriental plays are exceedingly long; those in favour among the Burmese, for instance, last considerably over a week, so we take it that Dr. Laurence must have condensed her original considerably, for her poem, written as a play, is only in five acts, and those not very long. Probably the action has gained by condensation, although numerous details have possibly been left out. The plot deals with the faithfulness and self-denial of two high court officials, their wives, and the daughter of one of them. Dr. Laurence has put together a most readable story out of her materials, and although her metres are in general somewhat rough, that may be done on purpose in imitation of the original. Many passages are, however, melodious, such as those in Act II., Scene 7 *et seq.*, dealing with the island of the dead. In another place, Act IV., Scene 2, is a passage which is interesting from a physiological point of view, and if it be an original remark of the Chinese author and not an interpolation by Dr. Laurence is also interesting historically.

> "Shrilly outfloat the songs
> Of mitred priests and men,
> High—high o'er moor and fen
> Soars a pure note, the gain,
> Left to eunuchs for their pain."

It is well known that the great soprani of the eighteenth century, such as Farinelli and Senesino, were eunuchs and what glorious voices they had according to contemporary authors like Dr. Burney, but we were unaware that the beauty of a eunuch's voice was recognised so long ago as B.C. 2000.

JOURNALS AND MAGAZINES.

Scottish Medical and Surgical Journal.—The January number contains a triad of articles dealing with the problem of tuberculosis and with notification in particular. The first is by Dr. Byrom Bramwell, the second by a general practitioner criticising some recent remarks by the convener of the public health committee, and the third by the last-mentioned official responding to these animadversions. Dr. H. M. W. Gray records some cases of perforated duodenal ulcer, in which affection the outlook for the patient is seemingly worse than in gastric ulceration; and Professor D. A. Welsh and Dr. J. E. V. Barling record some observations on the state of the blood in hydatid disease, well-marked eosinophilia occurring in only half the cases. Dr. N. T. Brewis narrates two cases of hysterectomy for fibroids complicating pregnancy.

Medical Chronicle.—The first number of the year opens with an interesting paper by Dr. J. Sholto C. Douglas on the subject of the invasion of the pericardium by malignant tumours arising within the thorax; by far the larger number of such cases seem to follow œsophageal cancer and are brought about by direct extension, not by metastasis. Dr. James McIlraith concludes his paper on the etiology of convulsions in children and sums up the results arrived at: the "predisposing causes," rickets and an inherited neurotic taint, are by far the most important factors in the production of this symptom.

West London Medical Journal.—The most noteworthy paper in the January issue of this magazine is perhaps Dr. A. E. Russell's study of the causation of uræmia, which he attributes to cerebral œdema; the results obtained by lumbar puncture support this view and the occurrence of "choked discs" may be similarly explained. Mr. Donald J. Armour writes on perforation in typhoid fever and gives advice as to the performance of operation for this accident; Mr. J. D. E. Mortimer considers the subject of anæsthetisation in operations on the urinary organs and appears to find the A.C.E. mixture best for use in such cases.

Journal of Pathology and Bacteriology.—The January number, completing the eleventh volume of this journal, contains several papers of considerable interest. The obituary notice of the late Professor Ernst Ziegler by an old pupil, Dr. James Miller, gives a very interesting sketch of the work of this great and industrious pathologist, one who has had an immense influence on the education of rising pathologists of all nationalities. The account of Some Experiments in Connexion with Dr. Marmorek's Method for the Early Diagnosis of Tuberculosis, by Dr. Harold R. D. Spitta, is of interest, not because of what it proves but because of what it fails to prove—the light in which the author also views his work. Mr. W. James Wilson of Belfast writes a paper on Pleomorphism as Exhibited by Bacteria Grown on Milk containing Urea, extending and confirming the observations of previous workers. Mr. C. Jocelyn O'Hehir contributes a Note on the Coagulation of Milk by Bacillus Coli Communis, and Professor G. Sims Woodhead and Mr. W. A. Mitchell give a series of experiments from which they argue that opsonins present in the blood may pass into milk and point out that such opsonins may play a part in rendering tubercle bacilli less capable of invading the tissues of the human subject. Professor J. Lorrain Smith contributes a paper on the Staining of Fat with Basic Aniline Dyes, in which he concludes that carbonic and other acids so act upon fat that it acquires the power of combining with a colour base; this interesting paper was read at the inaugural meeting of the Pathological Society of Great Britain and Ireland held in Manchester on July 14th, 1906. Dr. F. A. Bainbridge, under the title of "The Effects of Ligature of one Ureter," records a series of experiments bearing on Miss Sheldon Amos's work. He maintains that the secretory power of the kidney as evidenced by its capacity to secrete water and nitrogenous constituents steadily diminishes after ligature of the ureter, but is not lost at the end of two months. No evidence of absorption was obtained when potassium iodide was put, under a pressure of from 50 to 80 millimetres of mercury, into the renal pelvis. Dr. James Miller and Mr. T. R. St. Johnston record a case of Waxy Bronchocele with Amyloid Disease of the Air Passages and

Lung. The illustrations with this paper are excellent. Dr. C. W. Crispell (Lausanne) gives an account of a case of Primary Angio-sarcoma of the Liver. Dr. J. W. Rob, following up recent work on the elastic tissues, gives a very good account of the Elastic Tissue of the Testis in Normal and in Pathological Conditions. Mr. S. G. Scott describes a case of Obstruction Atrophy of the Pancreas, which he exhibited at the Manchester meeting of the Pathological Society of Great Britain and Ireland. He controverts the idea put forward by Herxheimer that the whole pancreas controls sugar metabolism and that diabetes is due to a functional lesion of the gland. "A Complete Pathological Investigation of Three Cases of Acute Lymphocythæmia," by Messrs. Leonard S. Dudgeon, W. L. Harnett, and P. M. Panton, is a very full and painstaking account of the pathological findings in the blood and organs of these cases. They come to the conclusion that it is advisable to allow the predominant cells in acute lymphocythæmia to be classified as lymphocytes and that this condition must for the present, at any rate, be looked upon not as an acute myelæmia. They can find no evidence that it is a parasitic disease. A full index of subjects and authors for the volume and a card-catalogue index complete the number.

Erratum.—In a review of a book entitled "The Tourist's India," published by Messrs. Swan Sonnenschein and Co., in THE LANCET of Feb. 2nd, p. 299, the remark occurs: "Should the work reach a second edition an index should be provided." We regret that our reviewer inadvertently missed the fact that there was an index owing to its being placed after a map which he took to be the conclusion of the book.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

(1) "TABLOID" CALCIUM LACTATE; AND (2) "TABLOID" PECTORAL PASTILLES.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

ACCORDING to our analysis, each tabloid contains 0·329 gramme of calcium lactate calculating that five molecules of water are present in one molecule of the salt. This gives exactly five grains of calcium lactate as described. The deficiency of blood as regards coagulability which occurs in urticaria appears to be treated successfully by giving calcium lactate, and good results, it is stated, have been obtained in the treatment of certain forms of albuminuria and of headache and in serum rashes. The salt is also employed in aneurysm and in various forms of hæmorrhage. It is suggested, too, for use in hæmophilia, in uterine hæmorrhage, and in the preliminary precautions of surgical procedure. The lactate seems to be preferable to the chloride owing to the tendency which the latter has of producing digestive disturbance. 2. The pectoral pastilles consist of a perfectly clear jujube and contain well-known demulcent, sedative, expectorant, and aromatic principles. We have found them useful in the case of an ordinary cold.

LYMM PURE SALT.

(CHARLES MOORE & CO., LIMITED, LYMM, NEAR WARRINGTON.)

For a long time the ordinary table salt supplied to the public for dietetic purposes has contained impurities. Salt was, in fact, crudely obtained by merely evaporating brine. The result was a saline mass containing impurities which rapidly attracted moisture. Pure salt is not hygroscopic and hence does not "cake," even in a moist atmosphere. Such is Lymm pure salt. We could find nothing in it but sodium chloride beyond the smallest trace of moisture. Excluding moisture, the salt contains 100 per cent. of sodium chloride and nothing more satisfactory about it could be said.

PORT (MR. JORROCKS'S BRAND M.F.H. SPECIAL).

(W. WINCH HUGHES AND CO., 6-10, OSBORN-STREET, LONDON.)

Those who know "black strap" will recognise the characteristics of that excellent wine in "Mr. Jorrocks's M.F.H. port," which may be said to be midway between a "tawny" and a "vintage wine." It has evidently been matured for many years in cask judging from its peculiar softness to the palate and its developed fruity character. Analysis gave the following results: alcohol, by weight 18·08 per cent., by volume 22·18 per cent., equal to proof spirit 38·87 per cent.; extractives, 8·90 per cent.; sugar, 7·13 per cent.; glycerine, 0·56 per cent.; tannin, 0·175 per cent.; mineral matter, 0·15 per cent.; volatile acidity reckoned as acetic acid, 0·09 per cent.; and fixed acidity reckoned as tartaric acid, 0·30 per cent. The points worthy of note in this analysis are the practical absence of volatile acid, a normal amount of glycerine, and an amount of tannin coinciding with the statement that the wine has been well matured. The wine, in our judgment, is exactly what it is stated to be—a pure, genuine, matured port, and well suited for invalid use. It is practically free from volatile acidity, as is the case with all good ports.

NAUHEIM BATH SALTS.

(CROYDEN AND CO., LIMITED, 55, WIGMORE-STREET, LONDON, W.)

These salts make the administration of a bath effervescing with carbonic acid gas quite convenient and simple. The contents of the packets consisting of bicarbonate of soda are first dissolved in the water. Then the tablets of fused bisulphate of soda are placed at the bottom in such a way that a torrent of gas is given off which sweeps the surface of the patient's body. For the brine carbonated bath Droitwich brine crystals are first added. We are glad to note that the perfect ventilation of the bath-room is enjoined. This instruction should apply also to the deep bath, in which carbonic acid gas may accumulate with alarming results to the patient.

(1) OXYLITHE; (2) HYDROLITHE; AND (3) PERBORAL.

(SIEBE, GORMAN AND CO., 187, WESTMINSTER BRIDGE-ROAD, LONDON, S.E.)

1. Oxylithe is most convenient for the extemporaneous preparation of pure oxygen gas. It occurs in the form of small bricks which when placed in water evolve pure oxygen gas. The process is simple enough and there is no danger attending it. The formation of oxygen gas depends upon the action of water on the sodium peroxide. The gas may easily be collected in a gas-holder and a stream of oxygen is thus always available for medical purposes. 2. Hydrolithe, of less medical interest perhaps, evolves hydrogen in contact with water. 3. Perboral is an interesting compound of borax which yields oxygen in contact with moisture. The antiseptic properties of borax are thus supplemented to an important degree by the powerful action of oxygen *in statu nascendi*. It would seem to offer therefore an excellent material for applying an antiseptic in the treatment of wounds or for the purposes of a mouth wash.

UNBLEACHED FLOUR.

(THOMAS LEWIS AND CO., SNOWDON FLAKE FLOUR MILLS, BANGOR, WALES.)

The stupid demand on the part of the public for wheat flour as white as snow is readily met by submitting the flour to a bleaching process. Such a process is not calculated to improve the dietetic quality of the flour, whether the bleach used is nitrous acid, chlorine, bromine, ozone, or any other agent. Flavour, at any rate, is certain to suffer, and so it is that we commonly find the modern loaf of bread insipid and unappetising. We unhesitatingly condemn anything which

interferes with the natural quality of flour. It is pleasing to be able to record that there are manufacturers who are entirely with us on this question and who therefore continue to supply wheat flour that is not bleached by artificial means. We have received two samples of flour marked respectively Snowden Flake and L.L.L.L. from the above firm. It is easy to recognise the slightly golden colour of this unbleached flour. If a crevice in the flour be formed the golden colour is at once seen. On analysis Snowden Flake flour gave—moisture, 13·30 per cent.; mineral matter, 0·40 per cent.; and proteid, 9·70 per cent.; and the L.L.L.L. brand, moisture, 13·50 per cent.; mineral matter, 0·60 per cent.; and proteid, 8·37 per cent. Both flours made an excellent bread with an attractive nutty flavour. The white anæmic loaf of bread is in our opinion one of the biggest food fallacies of modern existence.

BANANINE COCOA.

(BANANA BREAD FLOUR FOOD, LIMITED, MAY BUILDINGS, 51, NORTH JOHN-STREET, LIVERPOOL.)

We have already pointed out that banana flour must be considered as highly nutritious since it contains nearly 20 per cent. of proteid associated with a flour or starch which is readily digested. Bananine cocoa describes itself—that is to say, it is a mixture of banana flour and cocoa. The taste of the cocoa is peculiar and is improved, we think, by the addition of milk.

OKOL DISINFECTANT.

(THE SANITAS CO., LIMITED, LOCKSLEY-STREET, LIMEHOUSE, LONDON, E.)

Okol in its improved form is a very satisfactory emulsion containing as its chief active constituent phenol derivatives. As regards antiseptic power it compares very favourably with carbolic acid, showing, in fact, a coefficiency compared with that acid of 22. It is evident that by directing attention to the physical condition of a disinfectant fluid its germicidal power can be increased considerably.

MUTTON ESSENCE.

(G. NELSON, DALE, AND CO., EMSCOTE MILLS, WARWICK.)

This is a firm, clear jelly containing a certain proportion of the extractive matters of mutton. The flavour easily discloses the kind of meat from which the jelly has been prepared. We could find no evidence of metallic contamination and, in fact, the sample examined was contained in a glass bottle. The jelly contained, according to our analysis, 13 per cent. of solid matters and 87 per cent. of moisture. The mineral matter amounted to 1·10 per cent. The jelly contains a trifling proportion of nutritive proteid. The flavour is pleasant and delicately meaty. The preparation is an interesting departure from ordinary meat essences.

VILLACABRAS MINERAL APERIENT WATER.

(AGENT: MR. LOUIS VERDIER, 22, GRAY'S INN-ROAD, LONDON, W.C.)

This water is derived from a spring situated in the province of Madrid in Spain. Our analysis shows that the chief purgative salt present is sodium sulphate, magnesium sulphate being present in relatively small amount. The taste is therefore much less bitter than that of a magnesian water. We obtained the following results on analysis, expressed in grammes per litre: sodium sulphate, 81·76; magnesium sulphate, 3·67; sodium chloride, 1·06; and calcium sulphate, 2·04. Its laxative and purgative effects are satisfactory.

CHARCOAL BISCUITS.

(J. R. MASON, 38, CHAPEL-STREET, LONDON, S.W.)

Charcoal possesses remarkable absorbing properties and it is this fact which has suggested its use chiefly in the forms of indigestion accompanied by flatulence or eructation. It is most active when freshly prepared and it might be thought that in a biscuit this property would be lost altogether. This, however, is not so, for the biscuits under examination showed a distinct decolourising power on highly coloured solutions. The biscuits, in spite of their dull-black colour, were very palatable and, in fact, in this respect were indistinguishable from the ordinary biscuit. They are perfectly free from that undesirable feature which may be noticed in some charcoal biscuits of being gritty during mastication. This objectionable property can be got rid of by finely levigating the charcoal employed, which we understand has been the case with the charcoal used in these biscuits. They are not only free from grittiness but free also from sweetening agents.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Feb. 14th, 1829.

Pessaries are very excellent remedies where they are well adjusted to the parts; but Denman has remarked, with good reason, that many women lose the advantage of the instrument because of their impatience, or because, to use a female expression, they become fidgetty. If you introduce an instrument that does not exactly fit, they will not allow it to remain—they will not allow another to be tried—they are displeased, and petulant, and child-like—for there is a good deal of resemblance between the temper of women and children, they fall into a pet, and as we can hardly forbear petting them, what with the folly of the patient and compliance of the surgeon, my lady pouts, and loses her advantage. Now, at the time when you propose the instrument, you had better tell your patient, at once, "This instrument is really an excellent contrivance, but I know it will be of no use to you." "Of no *use* to me?—Of no *use* to me?—Why?" "Why? why because you will not allow me to try it sufficiently; there will be a little trouble attending it, and I know you will become fidgetty, fall into a pet, and prevent a fair essay." This brightens the lady's eye a little, gives a glow to the complexion, raises a small emotion of indignation, and puts her on her mettle, to use a phrase of the *manége;* her heart is excellent at bottom, but she does love a little perverseness, and is determined that you shall prove a pseudo-prophet; and thus, thanks to your management, and a taste of John Abernethy, the instrument gets fairly tried. A squeeze of the lemon has sometimes a very agreeable flavour. Recollect, however, that even the accomplished Lady Townly occasionally gave a little too much.

Excerpt from Lectures on the Diseases of Women and Children. Delivered at Guy's Hospital by Dr. Blundell. Lecture XV.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Feb. 7th, Mr. HENRY MORRIS, the President, being in the chair.

In accordance with a report from the Court of Examiners it was resolved that diplomas of Membership should be issued to 83 successful candidates.

Diplomas in Public Health were issued, jointly with the Royal College of Physicians of London, to 12 successful candidates.

Mr. Frederic S. Eve was re-elected, and Mr. J. Ernest Lane, surgeon to St Mary's Hospital, was elected a member of the Court of Examiners.

A petition was received from the London School of Medicine for Women and it was resolved that the petitioners should be informed that the question of admitting women to the examinations of the College is receiving the consideration of the Council.

BRISTOL MEDICAL DRAMATIC CLUB.—The Bristol Medical Dramatic Club, which has now reached its twenty-ninth season, has recently given five performances of Mr. H. Swears' *Home Sweet Home, with Variations*, at All Saints Hall, Clifton. There was a large attendance and the performance was a great success. The proceeds will be handed over to the Medical Club's Union which is endeavouring to secure an athletic ground for University College.

THE LANCET.

LONDON: SATURDAY, FEBRUARY, 16, 1907.

Congenital Syphilis.

THE sad condition of the victims of inherited syphilis and the means, if such there be, by which they may be rescued from the consequences of parental infection are subjects which of late have attracted considerable attention in Sweden; and we are indebted to Professor EDWARD WELANDER of Stockholm for an account of an institution which has been established in that capital for the purpose of overcoming an evil which may perhaps be more prevalent there than it is with us but which every medical practitioner, here or elsewhere, knows to be wide in its extent and far-reaching in its consequences. The Stockholm Institution, which is known as "The Little Home," receives only 12 patients and the ordinary duration of their stay is from three to four years, so that the effort of which it is the representative has so far scarcely passed beyond the experimental stage. The institution rests upon the belief that syphilis, whether acquired or inherited, may be cured by skilfully directed and sufficiently prolonged mercurial treatment; and this view of the matter seems fully to be supported by experience. The "little home" has so far received 29 children, one and all of whom have flourished during their stay; while hardly one has shown any symptoms of an active outbreak of the malady for which they were admitted. Five deaths have occurred among the inmates, but in each case the cause of death was something totally distinct from syphilis, such as diphtheria or inflammation of the lungs, and in none of the five did the necropsy discover any organic disease of a syphilitic character. 12 of the children have deen discharged strong and well, 12 are still in the home and under treatment, and all of them are making satisfactory progress. In view of the success of the experiment efforts are being made to establish similar homes in various localities and on a scale of sufficient magnitude so as to render it possible for every child who is a sufferer from syphilis, whether hereditary or acquired in some other manner, to receive in such an institution nursing and treatment continued for a sufficiently long period and without charge. In considering this element of the question it is necessary to remember that in Sweden any person of either sex who is suffering from a venereal disease is entitled to free admission and maintenance in a hospital; and that this right has been conceded for the last 90 years. The new proposal, therefore, is only for the establishment of institutions in which the requirements of young children will be specially considered and provided for; and, as we gather that hospitals in Sweden are supported by public funds, any arrangements which seem necessary could be made by those in authority without the delays and difficulties inseparable from appeals to the benevolent.

In the report of the Registrar-General for 1905 it is stated that the deaths from syphilis in children of both sexes under the age of one year amounted in England and Wales to 1·34 per 1000 births. These figures at first sight do not appear to indicate any extensive prevalence of the disease but the clinical experience of hospitals in all the great centres of population abundantly establishes that the mischiefs due to syphilis must be looked for rather among those who survive than among those who perish. The deaths above cited were in far larger proportion urban than rural, and the proportion of syphilitic survivors must in like manner be far larger in towns than in country districts. It is among these survivors that we must look for the full measure of the evils which Sweden is attempting to diminish and it would certainly be very difficult to exaggerate them. The experience of Swedish practitioners is to the effect that inherited syphilis is readily communicable to healthy persons with whom the infected children are brought into close communication and that morbid conditions may hence arise which escape treatment because their nature escapes recognition. They strongly assert that the disease has now reached a condition of prevalence in which it must no longer be regarded solely, or even chiefly, as a consequence of irregular sexual relations, but as something which may be diffused through various channels and may affect the most innocent persons, of all ages and of either sex. Of its far-reaching consequences it is unnecessary here to speak unless it may be to lay stress upon its effects in producing disease or instability of the nervous system, not only in the first sufferers from it but also in their offspring, and this to such an extent that it may with much probability be regarded as holding a high place among the antecedents or remote causes of some forms of insanity. The recent discovery of the spirochæta will probably open the door to a much more complete knowledge of the phenomena and consequences of syphilis than has hitherto been possessed; but the labours of Mr. JONATHAN HUTCHINSON have already enabled us to recognise it as the fertile parent of many evils with which it was not previously known to be connected, of blindness, of deafness, of debility, of ugliness, of everything that is hateful. Professor WELANDER, in the account with which he has favoured us of the effort now being made to deal with some of its worst consequences in Sweden, correctly speaks of it as "the form of disease which during the past four centuries has perhaps of all others occasioned among the peoples of our continent the greatest amount and the highest degree of suffering."

In any attempts which may be made to deal with syphilis in any of its forms in this country we are less favourably situated than our neighbours in the great Scandinavian peninsula. We receive no help from the State, however clearly its best interests are bound up with the health and vigour of the community. Our philanthropists, in relation to this matter, afford only too much ground for the charges of hypocritical self-righteousness which have been so freely urged against us by continental critics. When we read that any person suffering from syphilis or gonorrhœa is entitled, in Sweden, to treatment in hospital free of charge and remember that the rules of many London hospitals recently contained, if they do not still contain, provisions by which

such patients were expressly excluded, it is difficult to escape from the suggestion that we are still under the governance of survivals of the Dark Ages. It is impossible to remember, without a blush, the outcry against the Acts which afforded some protection against syphilis to our soldiers and sailors, and some security that their services when needed would still be available for the defence of their country. The Acts in question were at last removed from the Statute book, and we have now so to educate the public with all the energy that is called for by its defenceless state. We must diffuse the knowledge that syphilis is due to the invasion of the human tissues by a parasite the origin and the sources of virulence of which are unknown but which may obtain access to the body by many other channels than the too common one of sexual intercourse with an infected person and of which the presence, *per se*, proves nothing either to the advantage or the disadvantage of the victim. The extent to which innocent children suffer from the disease is alone sufficient to claim for it the attention of all genuine well-wishers of their kind and to rescue it from the position in which it has been left by the misguided zeal of honest ignorance. The parasitic cause of syphilis should be regarded and treated as we regard and treat any other widely diffused source of illness, with reference mainly to the safety and advantage of the community, and only secondarily to the possible misconduct of any individual. The children's "homes" of Sweden are clearly steps in this direction, and we wish that something of the same kind could be established among ourselves. They would be of great direct benefit to the affected children, whose cases in existing hospitals cannot be kept under observation and treatment for the necessary length of time; and they would be of still greater benefit as educational influences, tending to remove syphilis from the position of a moral to that of a physical disorder.

Idiopathic Cyanosis due to Sulph-hæmoglobinæmia.

THE careful study of unusual and anomalous cases, especially by means of the resources of the clinical laboratory, has resulted in the discovery of not a few diseases, or rather in their separation from conditions of which they were previously regarded as atypical forms. A very good example of such a pathological condition is afforded by certain forms of cyanosis which have been studied chiefly by Dutch physicians. A case of this kind has recently been carefully observed and studied in this country by Dr. SAMUEL WEST and Dr. T. WOOD CLARKE and recorded in a paper read before the Royal Medical and Chirurgical Society on Jan. 22nd and published in full in our columns.[1] They give references to the previously recorded cases of the condition, and their paper constitutes a valuable summary of what is at present known with regard to it. The patient was an unmarried woman, aged 37 years, admitted into St. Bartholomew's Hospital for debility and cyanosis, the latter condition being of such a degree that the skin appeared of a leaden hue. The appearance was obviously due to some state of the blood and not to any pigment deposited in the tissues, since on emptying any part of the skin of blood by pressure the skin was found to be of its normal colour. Careful physical examination failed to reveal the existence of any of the ordinary causes of cyanosis. The heart and lungs were apparently normal and there was no evidence of any mediastinal disease or pressure. There were no indications of the existence of emphysema or of congenital heart disease and there was no clubbing of the fingers. There was no dyspnœa, neither the respirations nor the pulse presenting any noteworthy departure from the normal. The previous history of the patient showed that she had been an invalid for ten years or more, that she was very neurotic, and had suffered from neuralgia, sleeplessness, dyspepsia, and constipation. The cyanosis apparently commenced in August, 1905, at first being noticed only during exertion but gradually becoming persistent and associated with increasing weakness. At St. Bartholomew's Hospital an extensive series of observations were made to elucidate the nature of the cyanosis. In the first place cytological examinations of the blood were made to exclude the possibility of polycythæmia, and the results showed practically nothing abnormal. Spectroscopic examination of the web of the thumb and of the blood after being shed showed a spectrum with bands which were at first regarded as those of methæmoglobin. On centrifugalising the blood, the serum showed no trace of such bands, while they were distinct in the layer of red blood corpuscles; the case was therefore regarded as one of intracorpuscular methæmoglobinæmia. Examination of the urine showed that it was free from methæmoglobin. Since cyanosis of similar character has been described by some of the Dutch observers from sulph-hæmoglobin, further investigations were made by Dr. WOOD CLARKE, who demonstrated that the spectrum obtained from the patient's blood was that of sulph-hæmoglobin and not that of methæmoglobin. The distinction is readily made when the two spectra are carefully compared, the dark band in the red from sulph-hæmoglobin being nearer the violet end than that of methæmoglobin; moreover, when the latter substance is treated by ammonium sulphide the band in the red disappears, while with sulph-hæmoglobin it persists, a test used by VAN DER BERGH of Rotterdam to distinguish between the two substances. A further means of differentiation between them is given by treating them both with carbon monoxide, when the bands of sulph-hæmoglobin are shifted slightly towards the violet end of the spectrum, those of methæmoglobin being unaltered. An attempt was made to determine if free sulphuretted hydrogen were present in the patient's blood with negative results, but control experiments showed that the amount of sulphuretted hydrogen required to form sulph-hæmoglobin at the body temperature is far below that which can be detected by any chemical means. Blood cultures were made but proved sterile. Various examinations of the urine and fæces were also made but without any noteworthy result except that so far as could be determined from a few examinations there was no increase of sulphuretted hydrogen forming organisms in the intestines.

A study of the literature by Dr. WEST and Dr. WOOD CLARKE afforded 12 other cases, eight being due to

[1] THE LANCET, Feb. 2nd, 1907, p. 272.

methæmoglobin and four to sulph-hæmoglobin, although since the four cases first recorded were observed before the discovery of sulph-hæmoglobinæmia their nature must be regarded as doubtful. The first case observed was recorded by STOKVIS of Rotterdam in 1902 in a soldier who had been cyanotic for five years. STOKVIS concluded that the condition was due to intestinal absorption. TALMA of Utrecht next recorded three cases of methæmoglobinæmic cyanosis associated with long-standing diarrhœa. He proved that the pigment was in the corpuscles and not in the plasma, as is usually the case in methæmoglobinæmia due to poisoning by such drugs as chlorate of potassium, nitrite of amyl, phenacetin, antipyrin, veronal, trional, and sulphonal. VAN DER BERGH in two separate papers recorded a series of cases, and to him belongs the credit of differentiating the cases due to sulph-hæmoglobin. A case of methæmoglobinæmic cyanosis was recorded by Dr. G. A. GIBSON and Dr. C. C. DOUGLAS in THE LANCET in 1906,[2] and in this case cultures of bacillus coli communis were obtained from the blood, and the condition was described under the title of "microbic cyanosis," but they expressly stated that their results could not be taken as final since they were unable to confirm these findings. Dr. WEST and Dr. WOOD CLARKE, in discussing their own case, consider a microbic infection improbable, nor do they regard an increased formation of sulphuretted hydrogen in the intestine as likely to be the sole cause. They suggest that the error may be due rather to a hyperabsorption than a hyperformation of sulphuretted hydrogen. Their paper is an interesting and valuable contribution to our knowledge of an obscure and little known condition, and the investigation of their case affords an excellent model upon which similar cases might with advantage be studied in the future.

The Case of a Medical Officer in the Highlands.

THE position of medical men employed under local authorities can never be satisfactory where the employers can exercise the power of terminating the employment without reference to an independent authority, such as can, if need be, correct injustice and temper arbitrary action without regard to strictly local and individual prejudices. More especially is this the case when the local authority is a body of a parochial nature, endowed with patronage by an Act of Parliament which compels it to select a medical man for certain purposes, and consisting of members against whom it may be the duty of the medical man to take action at times in virtue of the office intrusted to him. The considerations which move petty local authorities have made themselves felt in England, conspicuously in rural districts, by cramping the efforts of medical officers of health, and it has long been notorious that in Scotland the Poor-law medical service is in urgent need of reform. A flagrant instance of injustice, the case of Mr. J. LAMONT, medical officer of South Uist, compelled attention to this so long ago as 1899, but Parliament has had other matters to occupy it since then and the opportunity for thorough and effective reform has not been accorded.

A case, arising like that of Mr. LAMONT out of the powers exercised by parish councils, has just occurred in Sutherlandshire and should again direct attention to the position of the Scottish Poor-law medical service. The case is not of so obviously startling a nature as was Mr. LAMONT'S, but on the other hand it may be regarded as a type of incident lending itself less readily to that rectification which public opinion often compels when it is possible to rouse the said opinion in the presence of abuse. In the new example of parochial manners the councils of the three parishes of Kintail, Glenshiel, and Lochalsh held a meeting on Christmas Eve and on the motion of the Established Church minister of one of them, seconded by a farmer, passed a resolution discharging from the service of the councils Dr. GEORGE DUNCAN, assigning his advanced age as a reason for terminating his tenure of office. The *Northern Times*, from which we gather the facts connected with this case, expresses a doubt as to the proceedings having been conducted with the outward formality usual upon such an occasion; but whether notice of the proposed dismissal appeared upon the agenda paper or whether the whole affair was sprung upon the meeting our contention, and that of the medical profession not only in Scotland but throughout the United Kingdom, must remain the same—namely, that such bodies as parish councils should employ their medical officers upon such terms as to salary and matters connected with it as members of a learned profession have a right to expect, and should be obliged to submit their reasons for desiring to determine any appointment to the independent authority of the Local Government Board. Our contemporary, in a carefully written leading article, reviews the devolution through successive statutes of the powers which the parish councils referred to claim to have exercised. If the *Northern Times* is correct in its appreciation of the law applicable in Scotland to the case under its consideration, the parish councils named have exceeded their rights, and the question of terminating the services of Dr. DUNCAN was one upon which the Local Government Board should have been asked to adjudicate. In this case the medical officer has his remedy in his hands; if, that is to say, he can secure the support necessary to enable him to prosecute a claim depending upon a point of law likely to be argued through successive Courts of Appeal, or if his own means are sufficient to permit of his undertaking the risk. When, however, we consider the cause alleged for his dismissal—that of age—it becomes evident that the hardship of his case is increased by the circumstance which has given rise to it. Dr. DUNCAN is aged 75 years and for 50 years he has held with credit the office which he has now been ordered to abandon. Our contemporary, no doubt, expresses the opinion of those well able to judge when it asserts that physically and mentally he is perfectly competent to carry out his duties, being a gentleman of great activity and bodily strength, but it is obvious that at such a time of life a man is ill fitted to bear the strain of litigation and of fighting for rights the

[2] THE LANCET, July 14th, 1906, p. 72.

enjoyment of which cannot in all probability be thereby extended for any considerable period. It is equally clear that the Local Government Board would be the proper authority to determine a disputed point of some difficulty and delicacy and to decide judicially between the local councils which would support their views by alleging an unquestioned fact, and the medical officer, who would maintain his own side of the case, adducing such evidence as he could bring before the Board. As matters stand at present a local authority, which before the Local Government Board would be in its true position of a party, sits as a judge in its own case and decides a question of fact as to which the prejudices, possibly natural and inevitable, of its members must necessarily prevent them from giving full and impartial hearing to those who differ from them.

It must be borne in mind that in asking for security of tenure for medical officers under local authorities we are not merely espousing the interests of the medical profession in order to secure material advantages for its members. Security of tenure, better rates of pay, provision for suitable periods of rest, and other advantages hitherto asked for in vain react in favour of those for whose benefit the officers claiming them are appointed by securing a better quality of service than is otherwise likely to be available. And security of tenure above all makes for efficient work by rendering the medical officer independent of those who, if able to procure his dismissal, may exert every influence in their power to get rid of a man when he is obnoxious to them, and who moreover can do this in such a manner that it is almost impossible to bring home to them the discreditable motives which have inspired their action.

Annotations.

"Ne quid nimis."

THE AMALGAMATION OF MEDICAL SOCIETIES IN LONDON: THE NAME OF THE NEW BODY.

THE amalgamation of certain of the medical societies having their headquarters in London, proposals for which have been so often referred to in our columns, is now nearing realisation. On next Tuesday, at the Royal College of Physicians of London, a meeting is to be held of the societies taking part in the amalgamation, when the chief business will be to decide upon the name of the new society, all the serious obstacles to union having been patiently removed. To find a new name, however, which shall aptly express the aims and scope of the society may not be quite easy. Various opinions will be offered upon the advisability of using the word "academy," "institution," or "institute" instead of "society," and several obvious titles may be objected to because of the fear that they may lead to confusion with the titles of other existing bodies. For this very reason we doubt if it is advisable to use the designation of "academy," "institute" or "institution" unless it is proposed to sacrifice the prefix Royal, for the Royal Academy and the Royal Institution are well-known bodies, and there is also a Royal Institute of Public Health. Again, the new amalgamation will not be an institute, an institution, or an academy, if the stricter meaning of these words is adhered to, but it will be a society. We suggest that it might be called the Royal British Society of Medicine. This is a short but sufficiently descriptive and inclusive title. There is no danger of confusion either with the Royal Society or the Medical Society of London, and as there will naturally be a desire to retain the title of Royal the new body would be separated in the public mind from the British Medical Association.

JANUARY AT HOME AND ABROAD.

—	Highest temperature.	Lowest temperature.	Mean maximum temperature.	Mean minimum temperature	Mean temperature for month.	Range of temperature.	Days with rain.*	Total fall of rain in month.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.		Ins.
Scilly	54	28	49	44	46·2	5	6	0·82
Jersey	52	21	46	39	42·4	7	12	1·57
Torquay	52	25	46	38	42·6	8	8	1·73
Bournemouth ...	51	21	44	36	40·2	8	5	0·98
Bath	53	20	44	34	39·1	10	7	1·21
Manchester ...	51	18	44	35	39·5	9	14	1·87
Birmingham ...	50	16	43	34	38·3	9	5	0·84
Nottingham ...	52	14	43	33	38·0	10	5	1·03
London...	52	23	44	35	39·6	9	3	0·70
Paris	50	5	42	29	35·4	13	10	0·64
Berlin	45	zero	36	27	31·2	9	15	2·15
Nice	55	28	50	36	43·0	14	3	0·44
Florence	55	25	45	32	38·4	13	8	1·58
Rome	57	28	49	37	43·0	12	8	4·32
Naples	56	30	50	39	44·4	11	10	2·58
Palermo	65	32	55	42	48·7	13	12	2·90
Malta	60	42	56	48	51·9	8	15	3·27
Algiers	70	36	60	48	53·8	12	13	2·88
Biarritz...	59	27	46	37	41·5	9	8	3·13
Lisbon	59	37	54	42	48·0	12	4	0·91

* A day when at least 0·04 inch has fallen.

The above figures show the chief meteorological features at certain selected spots at home and abroad during last month. In most of the foreign places and also in this country the weather was mild and fine until after the middle of the month, the Riviera being particularly fortunate in its abundance of sunshine and absence of wet days. It will be observed that Jersey and Torquay were as warm during the day and milder at night than Biarritz and only slightly cooler on the average than Rome, while the Scilly Isles—the mildest spot in the United Kingdom—were warmer than Naples and also experienced warmer nights—as is shown by the above mean minimum temperature—than Palermo and Lisbon. The only places entirely to escape the frost were Malta, Algiers, and Lisbon. Even at Scilly, where there had been no frost for at least three years, the thermometer showed a minimum of 28° during the latter part of the month. All the English stations were much milder than Paris and all except Nottingham and Birmingham were milder than Florence. In London the screened thermometer went below 32° on eight nights, while at Florence frost occurred on 13 different occasions. At Rome there were as many as nine frosts and at Naples three. Algiers and Malta, the two most southern places given in the table, experienced very mild temperatures. The days at Algiers, with a mean maximum temperature of 60°, were about as warm as the average day towards the end of May in the South of England, while the temperature of the nights (shown in the above table by the mean of the minima) both there and at Malta approximated to that of the nights of early June in this country. Both those resorts, however, had rather frequent rain and the weather generally was not nearly so sunny as that enjoyed in the Riviera and at Lisbon. Berlin, of course,

expects to be cold during January, but last month, owing to the intensity of the frost after the 19th, the mean temperature was exceptionally low. For several days the thermometer remained much below the freezing point. On the 22nd and 23rd the respective maxima were as low as 7° and 10°, while on the 24th the highest temperature was only 19°.

AMATEUR PHYSICIANS IN THE PAST.

IT is instructive to find the Jacobean physician John Cotta, or Cottey, who was a native of Warwickshire and a contemporary of Shakespeare, uttering complaints against the interference of women in matters medical. In Chapter III. of his little-known diatribe against quacks—"A Short Discoverie of the Unobserved Dangers of Severall Sorts of Ignorant and Unconsiderate Practisers of Physicke," he writes caustically and at some length of the harm done to patients by officious friends, especially women, who have a nostrum or a treatment to vaunt or to recommend on every possible occasion. His chapter is headed: "Women, their custome and practise about the Sicke; common-visiting counsellors, and commenders of Medicines." As it stands, it is remarkably applicable to modern conditions and we are tempted to believe that, in his practice in Northamptonshire, Dr. Cotta had met with the prototypes of our latter-day faddists. "Many times," says he, "have many by persuading without reason or judgment drawn their friend unto death, contrary to their better meaning, troubling them with fear of death in the remedy, while they run themselves to death for want of remedy. Ignorant counsell is never good counsell. And therefore it is honest for itself, and safe for the sicke, that ignorance be ever silent or never presumptuous." Several instances are cited of deaths following on well-meaning amateur advice. Sometimes the victims of "commenders of medicines" have miraculous escapes. Thus, "a woman sometime came to advise concerning an extraordinary accident in her ordinary use of spurge-comfits. She gave (at the same time herself, and some others in the same house taking thereof with answerable effect and evacuation) unto a very aged man eight in number (being her usual dose). The first day they had not effect with the old man, and in all the rest performed their wont: she therefore gave him as many the next day with the like effect, and as many every day unto the tenth day, with the like proof. It was then her fear he had tasted his own funeral feast." But the old gentleman survived his dose of 80 "black pills" and doubtless disappointed his expectant heirs. It is a question whether many deaths, especially of children, may not in the past have been caused by nostrum-taking of this kind.

THE UNCOMFORTABLE BOOT.

THE complaint is common enough that the boot is the most difficult part of our clothing in regard to securing a really comfortable fitting and there is little doubt that the prevalence of deformities of the feet and even lameness may often be referred to the badly fitting boot. It must be readily conceded, however, that during recent years considerable advances have been made in regard to standardising the size and shape of boots, so that less trouble is given than formerly to find a comfortable pair for everyday wear. This progress has been such, in fact, as to threaten the last with extinction. Even this improvement, however, does not deter some people from expressing the opinion that the brown or tan leather boot is much more comfortable to wear than the black boot and is, moreover, more durable. It seems pretty certain that for some reason or other tan leather keeps softer than blacked leather and one explanation of this may be that in the great number of cases the blacking used for polishing black boots has strongly acid properties, whereas the pastes used for polishing brown boots are never acid and consist of a kind of varnish made of oils and waxes. In many of the formulæ given for making blacking a very large proportion of oil of vitriol or strong sulphuric acid is directed to be used. The chief ingredients of boot blacking appear to be ivory black, treacle, and oil of vitriol. Sometimes hydrochloric acid is used. The object of the acid apparently is to dissolve out the mineral matter (chiefly phosphate of lime) of the ivory black and so to reduce it to a very fine spongy state. The result is that the blacking is very acid, if not with sulphuric acid certainly with phosphoric acid. As a matter of fact, we have found sufficient free sulphuric acid in blacking which we have examined to char paper when dried upon it. It is conceivable, therefore, that the constant use of blacking on leather is likely sooner or later to have an injurious action upon it, to render it perhaps hard and unyielding and less durable. If such is the case the boot may well become uncomfortable to its wearer. The destructive action of sulphuric acid on leather is very well illustrated in the case of the leather bindings of books which have been kept on the top shelves of a library, at a level, that is to say, above that of the gaslights. We have known it possible to scrape off the binding a powder resembling snuff in appearance which on analysis proved to contain quite an astonishing proportion of free sulphuric acid. The view that the leather of the brown boot, polished, that is, with wax and oil, keeps softer and more comfortable than the leather of the black boot, polished day by day with acid blacking, may find this explanation—that in the latter case the acid blacking slowly destroys the pliable qualities of the leather, while in the former the neutral oils and waxes preserve the softness of the leather. If that be so, acid blacking might be given up with advantage and neutral boot polishes substituted, for there is no greater discomfort in regard to matters of personal dress than a badly fitting boot or one the leather of which is, or becomes, as hard as wood.

THE CHRONIC RELAPSING PYREXIA OF HODGKIN'S DISEASE.

IN Guy's Hospital Reports for 1906 Dr. Frederick Taylor has drawn attention to the fact that in Hodgkin's disease for an extraordinarily long time attacks of pyrexia separated by periods of apyrexia (relapsing pyrexia) may occur. He reports nine cases and gives temperature charts of two for long periods. In one case a woman, aged 20 years, was admitted on Dec. 14th, 1900, with a mass of enlarged lymphatic glands in the posterior triangle of the neck which appeared after a blow on the spot. She was rather pallid and had a little pyrexia. A blood count gave 4,400,000 erythrocytes and 8000 leucocytes per cubic millimetre. The glands did not further enlarge but it was thought best to remove them, which was done in February, 1901. They showed simple hyperplasia and were regarded as part of Hodgkin's disease. The patient left the hospital but was readmitted on July 31st. She was pale and there was a small lump under the scar of the operation. In the abdomen a mass extended from the left costal margin to one inch to the right of the umbilicus and one inch below it. It was freely moveable from side to side but moved little with respiration and had an irregular surface. Splenic dulness began at the upper border of the ninth rib and the edge of the organ could be felt half an inch below the costal margin separate from the tumour. The lower end of the tumour was free from the pelvis and the mass could be pushed forwards from the loin. Though spontaneously the seat of pain it was not

tender. The apex of the left lung was rather dull and a few râles were heard on both sides. The urine contained a trace of albumin. The temperature was 103·4° F. and gradually fell to normal in the next three days and remained subnormal until August 10th. A blood count gave 3,750,000 erythrocytes and 7000 leucocytes per cubic millimetre, and hæmoglobin 60 per cent. On August 15th the temperature began to rise again but it fell to normal by the 24th. During this attack of pyrexia the tumour again became painful; the pain ceased with the disappearance of the pyrexia. Another attack of pyrexia occurred from Sept. 6th to 12th inclusive and still again from Sept. 22nd to 30th. On Oct. 1st two glands could be felt in the neck near the scar. The patient left the hospital on Nov. 17th but was readmitted on Dec. 26th. She showed periods of pyrexia as before until March, 1902, when she was discharged. She died early in 1903. Analysis of the temperature charts showed that between the end of July and the middle of November, 1901, there were pyrexial attacks of from seven to ten days' duration separated by intervals of from eight to 12 days. From her readmission in December, 1901, to her discharge in March, 1902, there were at least four attacks of from five to ten days' duration separated by intervals of from five to 11 days. In another case, in a man, aged 38 years, relapsing pyrexia was observed for 12 months, which differed from that in the preceding case in that there were long periods in which there was no day entirely free from fever. But in these long periods there were alternations of periods of relatively high fever with periods of relatively low fever. At other times there were alternations of periods of pyrexia with periods of apyrexia. Dr. Taylor suggests that this peculiar form of pyrexia—chronic relapsing pyrexia—may be useful in the diagnosis of doubtful cases of Hodgkin's disease.

THE LATE PROFESSOR MENDELÉEFF.

OUR Russian correspondent sends us the following notes about the late Professor Mendeléeff which form an interesting addition to our appreciation of that great man published in THE LANCET of Feb. 9th, p. 370:—"The comprehensive genius of Mendeléeff and his restless activity are well shown in the reminiscences now being published in the Russian press. For a considerable time, says one who interviewed him lately, he was deeply immersed in a comparative study of the Russian census of 1897 and of the long series of American censuses dating from 1790 in search of evidence in support of a favourite ethnological theory of his that the Russian and North American races are reaching on to, and will meet in their greatest intensity on, the Pacific Ocean. When discussing this work he revealed the patriotic fervour of his nature. He was, according to the opinion of the Academician Tchebischeff, 'a true professor,' for 'his name is the one you meet with in your first acquaintance with science; his name is associated with the elementary principles.' The Russian press recalls with great satisfaction the day when Professor Mendeléeff was installed as Doctor at Oxford, and it dwells on the favour with which the English look on his 'Basis of Chemistry' and the high esteem in which the English translation of that work is held. He was an ardent and ready advocate of popular universities in Russia and all his communications on the subject were signed in full. He would say, 'These are my conscientious thoughts: I never hide anything.' One of his most recent experimental studies was the subject of 'absolute gravity.' For the purpose of this investigation he got a loan from the Russian Treasury of a large quantity of gold which he fitted up in the form of a pendulum with a golden ball in a special tower of his own design. He was passionately fond of the works of Paschkin whom he frequently quoted as a genius such as is born only once in the course of several centuries. He also bore the professors of his far-off youth in affectionate remembrance, and in his later years, among many pictures which adorned the walls of his study the portrait of Voskresensky (of whom Liebig used to say, 'of all his teachers there was none equal to Voskresensky') looked down on him."

THE TRAFFIC IN OLD HORSES.

UPON several occasions, and notably in our issue of May 27th, 1905, p. 1446, we have protested against the cruelty involved in shipping old broken-down or diseased horses to ports abroad, more especially to Antwerp and Rotterdam, and we were pleased to see in the daily press on Feb. 7th a notice that the Belgian Minister of Agriculture had requested the Antwerp city authorities to suppress this deplorable traffic. It is no concern of ours whether the Belgian or Dutch municipal authorities are willing that their poorer inhabitants should be fed upon meat derived from diseased and broken-down horses, but it is not creditable to our country that its Government should take no steps to stop a traffic by which not only are diseased animals openly sent abroad for food but also one in which abominable cruelty to the wretched animals in question becomes almost a necessity. In the last case upon which we commented, Mr. Mead, the magistrate before whom the prisoner was sentenced, said that the whole traffic was a discreditable one. Now that the Belgian authorities have apparently taken the matter up we earnestly hope that our own Foreign Office or Board of Trade or Board of Agriculture, whichever be the department concerned, will do its share in putting a stop to a scandalous traffic. It is no excuse to say that if the unfortunate animals are killed on the other side of the North Sea they are able to be sold for a higher price than if they were killed on this side. The keeping of a rat-pit, of a cock-pit, or of a bull-ring were all profitable occupations; they involved gross cruelty, however, and were very properly put an end to in this country. The same should be the case with the traffic in old horses. As evidence of the extent of the trade we may add that on Wednesday, July 5th, 1905, the Under Secretary of State for Foreign Affairs, answering the question of Mr. Cremer in the House of Commons, said that during the year 1904 2475 horses were exported to Belgium and 2333 to Holland, every such horse being under the value of £5.

THE NUTRITIVE VALUE OF VEGETABLE JELLIES.

UNTIL recently table jellies have been prepared chiefly from animal gelatin, though the diet of invalids has been varied with jellies made from the lichen known as Iceland moss and the seaweed known as Irish moss. The production on a large scale of agar-agar from the Japanese seaweed, *Gelidium corneum*, has led to its employment as a substitute for gelatin in jellies, a substitution which would probably be more general than is the case were it not for the fact that a jelly prepared from agar-agar is not perfectly transparent when cold, whereas a jelly prepared from gelatin possesses a bright and pleasing transparency. Agar-agar is much cheaper than gelatin for this purpose owing to the greater proportion of water that it takes up to form a jelly. In preparing table jellies it is usual to take one ounce of gelatin to one and a half pints of water, but in the case of agar-agar 66 grains are sufficient—i.e., about one-sixth the amount of gelatin required. These substances differ widely, however, in composition, a fact which is only just beginning to be recognised. Irish moss contains about 60 per cent. of a gelatinous principle and probably comes nearest to gelatin itself in composition, but Iceland moss and agar-agar consist almost entirely of carbohydrates, which though only slightly soluble in cold water, dissolve

in hot water, the solutions gelatinising on cooling. There has recently appeared in the *Journal of Biological Chemistry*[1] a study of the nutritive values of these substances as well as of the Japanese jellies "kombu," "nori," and "wakama," which has been made by Mr. T. Saiki, with valuable results. The carbohydrates present in these "vegetable jellies," though possessing the property of gelatinising, were found to pass practically unchanged through the human body, resisting in turn the action of saliva, the gastric, pancreatic, and intestinal juices, as well as of the colon bacilli. The only alteration observed was the absorption by the jellies of large quantities of watery fluid, causing the elimination of copious watery fæces. Mr. Saiki concludes that these "vegetable jellies" are non-nutritious, though they are harmless. These results are extremely interesting and serve to show the necessity for medical guidance when new substances are introduced for human consumption. It is of interest to note that the great water-holding capacity of agar-agar has been put to therapeutic use in cases of constipation and one enterprising manufacturer has under a fancy name put before the profession a preparation of agar-agar and cascara sagrada.

THE LONDON COUNTY COUNCIL ELECTIONS AND THE BRITISH MEDICAL ASSOCIATION.

THE Metropolitan Counties branch of the British Medical Association is taking steps to secure from candidates for the London County Council at the coming election assurances of support upon certain questions of interest to the community and to the medical profession. They are matters for Parliamentary legislation and do not concern the London County Council exclusively, but it is a body in which a large number of Members of Parliament are to be found and of which the influence is considerable. The two questions submitted are also connected with functions performed under the supervision of local authorities whether metropolitan or not, and any expenditure arising from such legislation as is asked for would probably have to be administered wholly or in part by them. The first question asks the candidate whether he would "support Parliamentary legislation to enable local authorities to make provision for the payment of medical practitioners called under the requirements of the Midwives Act to assist midwives in emergencies." This refers to a well-known grievance of the medical profession and to a difficulty which must sometimes affect seriously those women in labour for whose assistance a medical man is urgently required. It is not, however, accurate to state, as the document prepared for questioning candidates for the London County Council does, that "in the event of everything proceeding satisfactorily they (the midwives) remain in full charge, but if there is the slightest complication they are legally obliged to call in a fully qualified medical practitioner." The rule is as follows: "In all cases of abortion, of illness of the patient or child, or of any abnormality occurring during pregnancy, labour, or lying-in, a midwife must decline to attend alone and must advise that a registered medical practitioner be sent for," examples being given of complications and symptoms which oblige the midwife to take the steps indicated. The midwife does not call in the medical man; she only advises the patient or those who may be concerned in her welfare to do so, and it is the attendance which these may decline to summon or may decline to pay for, or may be unable to pay for, the cost of which should be provided for out of public funds to the extent that the patient may not suffer from the refusal of the medical man to work without reward, and that the medical man may not be expected to do as a charity what the midwife, on the selection of the patient, is doing for a fee. The second question referred to asks whether the candidate would support amendments of the law relating to death registration, the looseness and inefficacy of which are notorious, but have been, and are, regarded with strange indifference by the legislature. The principal point insisted upon is that no dead body should be buried without the death being accounted for, either by a coroner's order or by a registrar's certificate, and attention is called to the fact that a medical man may now sign a certificate of the cause of death without being able to certify from his own knowledge that the person concerning whom he is certifying has died at all. The much-needed provision for payment by coroners for information to be obtained from medical men which will enable them to hold or to dispense with inquests upon proper grounds and for satisfactory reasons is also urged.

[1] Journal of Biological Chemistry, 1906, vol. ii., p. 251.

THE LIMITS OF PROPRIETORSHIP IN MATERIA MEDICA.

IN a recent number of THE LANCET[1] the general question of the validity of trade-marks and patents for medicinal articles was considered and attention was especially directed to the unfairness of allowing the trade-mark of a patented article to be protected after the lapse of the patent. The complexity of composition of many synthetic drugs renders the addition of a trivial, easily remembered name a necessity. But manufacturers have taken advantage of the position. Thus, the revoking of the patent for aspirin, the lapse of the patent for antipyrin, the devising of new methods of preparation of adrenalin, and the discovery of a new use for the already well known chemical substance phenol-phthalein, are examples that could easily be multiplied of opportunities that have occurred for the various manufacturers to place the same article on the market under different names. The following examples, taken from an excellent glossary of synonyms given in the *Chemists' Annual*, 1906, amply illustrate the folly of creating new names in this reckless fashion:—

Ammonium ichthosulphonate is also known as ichthyol, ichden, ichtammon, ichthammonium, ichthamol, ichthosan, ichthyodine, ichthyopon, isarol, piscarol, thigenol, thiolin, &c.

Epinephrine, the original name of the active principle of the suprarenal gland, is known variously as adrin, adrenalin, adnephrin, hæmostasin, hemisine, paranephrin, suprarenalin, vasoconstrictine, &c.

Naphthamine is synonymous with aminoform, cystamin, cystogen, formin, metramine, urisol, uritone, urotropine, and vesalvine.

Paraffin (soft) is also known as adepsine, chrisma, geoline, petrolatum, saxoline, salvo petrolia, vaseline, &c.

Phenolphthalein is synonymous with laxans, laxantin, laxatol, laxatoline, laxiconfect, laxonin, laxophen, paraphthalein, probilin, purgella, purgen, purgiets, purgo, purgolade, purgylum, &c.

Salacetin is known variously as acetyl salicylic acid, acetysal, aletodin, aspirin, salacetic acid, saletin salicyl-acetic acid, xaxa, &c.

In the glossary referred to an attempt has been made to introduce some uniformity into a nomenclature which is daily becoming more confused. Thus, the termination -caine is suggested for all local anæsthetics, giving the following general names: adreucaine (a compound of betacaine and suprarenalin), alphacaine (alpha-eucaine), amydricaine (alypin), amylocaine (stovaine), benzocaine (anæsthesine), benzocaine sulphophenate (subcutin or soluble anæsthesine), betacaine (beta-eucaine), ethocaine (novocaine), glycocaine (nervanin), guanicaine (acoin), and phenacaine (holocaine or amidin). It has been suggested[2] that as soon as a new article becomes of any importance or seems likely to survive it should be given an unregistered synonym for general use by physicians. In this way, by diligently using a common name which has been officially adopted, the sudden influx of other makers into the field, such as occurred with aspirin, or the discovery of a new therapeutic use for an old drug, as in the case of phenolphthalein, could scarcely result in the

[1] THE LANCET, Nov. 17th, 1906, p. 1391.
[2] Pharmaceutical Journal, Jan. 19th, 1907, p. 72.

same drug being known under a dozen different names. The subject has recently been ably dealt with by Dr. Solomon Solis-Cohen.[2] He considers that proprietorship in medicinal articles is unnecessary. Thus, quinine and salicin have never been the sole property of any one firm, though the preference for one make over another is readily indicated by adding the maker's name. He calls attention to the wanton exploitation of the medical profession by projectors of "fake" synthetics, alleged novel "amido-benzol derivatives," or "compounds of the benzene ring," novel only in name. Dr. Solis Cohen advocates the abolition of private property in the names of medicinal substances, conceding only the right to private property in processes for their production. He points out that when a name is given to a patented product it enters into literature, periodicals, dictionaries, text-books, and lectures and becomes public property as a common name. Otherwise the text-books and other printed records become a huge advertising medium for the manufacturers. He advocates the regulation of the whole question of proprietorship in drugs by a central authority in the United States—e.g., the council on chemistry and pharmacy of the American Medical Association. Such authority should lay down a code of rules to be observed by manufacturers in placing a new drug upon the market and inform the profession of cases in which those rules had been infringed. The power to control the existing abuses would then rest entirely with the physician. According as the standard set up was respected or defied the physician would have absolute power to prescribe or not the products of any maker.

THE METROPOLITAN STREET AMBULANCE SERVICE.

WE recently gave a summary[1] of the various efforts which have been made to remove the stigma attaching to London through the inadequacy of the public ambulance arrangements. As long as 28 years ago Sir John Furley, one of the founders of the metropolitan corps of the St. John Ambulance Brigade, took some practical steps to deal with the matter, but the start made did not develop. In 1902 Sir William Collins endeavoured to interest the London County Council in the question but with no practical result. But two years later, at the instance of the medical profession, the Metropolitan Street Ambulance Association was formed, and it seems as if there was now a probability that London would have an adequate ambulance service. The association now numbers more than 1000 members,. Still another stage was reached on Feb. 9th, when a conference, at which delegates from the metropolitan boards of guardians and other public bodies and societies were present, was held at Gray's Inn Hall to consider the provision of an ambulance service for London. The conference, which was presided over by Mr. H. T. Lyon, chairman of the ambulance committee of the Metropolitan Asylums Board, was preceded by a parade of ambulances in Gray's Inn-square, an exhibition of the Bischoffsheim street box and litter and displays of "first aid" by detachments from the Royal Army Medical Corps (Volunteers) and the Metropolitan Police. In Gray's Inn Hall the mayor of Holborn, Mr. W. D. Rawlins, K.C., received the delegates, when Mr. Lyon, who was appointed chairman of the conference, made an interesting speech, advocating the coördination of existing ambulance services into one scheme. A resolution to this effect was adopted, and we hope that the era of action has now begun. The ambulance needs of London have been sufficiently exposed and discussed, though a departmental committee appointed by the Home Secretary is still considering the whole question. We hope that this committee will meet the opinion of the conference that if the number of ambulances now available for use by the police, by the Metropolitan Asylums Board, by the borough councils, by the St. John and the Bischoffsheim Ambulance Associations, by the Royal Army Medical Corps (Volunteers), and by the railway companies could be employed in one coördinated service an effective ambulance system for the metropolis would be established. The difficulties ahead should not be insuperable.

[2] Journal of the American Medical Association, 1907, Jan. 19th, pp. 195-200.

[1] THE LANCET, Nov. 10th, 1906, p. 1294.

TRANSPLANTATION OF THE CORNEA.

SOME years ago many attempts, instituted by Professor A. von Hippel, were made to transplant portions of rabbit's cornea into the human cornea with the object of restoring transparency in dense leucomata left by injury or ulceration. In the majority of cases the attempts failed to attain the end desired. The grafts healed perfectly well, but the transplanted cornea soon became as opaque as the preceding leucoma and remained in this condition, so that vision was not improved. In a few cases encouraging results were recorded, though in none was perfect transparency obtained. The operation was finally abandoned as impracticable, but a successful case reported by Dr. Zirm of Olmütz, in Moravia, was recently recorded.[1] In this case human cornea from the freshly excised eye of a boy was used for transplantation into the eyes of a man with dense leucomata resulting from an injury with lime. The operation failed so far as the right eye was concerned but in the left eye the patient now has a low degree of vision, sufficient, however, to enable him to work. Too much stress should not be laid upon an isolated case of this nature and the result is not after all very brilliant. There is no reason why the method should not be attempted in suitable cases of blindness and it is possible that further improvements in the technique of the operation may be attended with correspondingly better results.

THE ROYAL COMMISSION ON VIVISECTION.

THE Royal Commission on Vivisection, which was appointed on Sept. 17th, 1906, under the chairmanship of Lord Selby (Mr. Speaker Gully), has issued its first report, which consists of two or three lines prefacing an appendix which contains minutes of the evidence taken during the months of October, November, and December, 1906. The commissioners think the present publication of this evidence desirable. The following are the names of the witnesses whose evidence is contained in the appendix: Mr. W. P. Byrne, C.B.; Mr. G. D. Thane, LL.D., M.R.C.S.Eng.; Sir James A. Russell, LL.D., F.R.C.P. Edin.; Sir W. Thornley Stoker, M.D. R.U.I., F.R.C.S. Irel.; Mrs. K. Cook ("Mabel Collins"); Dr. H. Snow; Mr. S. Stockman, M.R.C.V.S.; and Dr. E. H. Starling, F.R.S. Mrs. Cook and Dr. Snow represent the Parliamentary Association for the Abolition of Vivisection.

EPIDEMIC CEREBRO-SPINAL FEVER.

THE epidemic prevalence of this disease in the Scotch towns and in Dublin and Belfast shows no decline. It appears from the returns of the Registrars-General for Scotland and Ireland that during the week ending Feb. 9th 24 fatal cases were registered in Glasgow, four in Edinburgh, and one each in Dundee, Paisley, and Leith; and in Belfast 14 fatal cases were certified. Since Feb. 9th there has been no improvement. At Glasgow on Feb. 12th 11 deaths were recorded and on the 13th four deaths. A case was reported some ten days ago to Dr. J. Priestley, medical officer of health of Lambeth, who found the diagnosis unmistakable. All precautions were taken and no other case has been reported in London.

[1] THE LANCET, Feb. 9th, p. 395.

THE WORKMEN'S COMPENSATION ACT, 1906.

WE stated last week that a subcommittee of the Journal and Finance Committee of the British Medical Association had under consideration the possibility of starting a coöperative plan by which medical men could be insured under specially favourable terms in respect of risks arising under the Workmen's Compensation Act, 1906, which will come into force on July 1st. The subcommittee met again on Feb. 13th and made considerable progress. It is hoped that a detailed scheme may be ready for publication very shortly, under which it will be possible not only to make a substantial rebate to members of the medical profession but also to form the nucleus of a fund for medical benevolent purposes.

AT the annual general meeting of the Neurological Society of the United Kingdom, to be held at 11, Chandos-street, Cavendish-square, London, W., on Thursday, Feb. 21st, at 8.30 P.M., the presidential address on "The Distribution of the Arteries Supplying the Human Brain" will be delivered by Dr. C. E. Beevor.

WE understand that Dr. Donald MacAlister will not resign the presidency of the General Medical Council on his appointment as Principal and Vice-Chancellor of the University of Glasgow. We congratulate the Council and the medical profession upon the retention of Dr. MacAlister's eminent services.

THE 134th anniversary dinner of the Medical Society of London will take place at the Whitehall Rooms, Hotel Métropole, London, on Wednesday, March 13th, at 7 P.M.

THE REGISTRAR-GENERAL'S SIXTY-EIGHTH ANNUAL REPORT.

I.

THE annual report of the Registrar-General of England for the year 1905 has this week been issued by H.M. Stationery Office. The reports of this series, of which the present is the sixty-eighth, have always been welcomed by THE LANCET, not as the best possible index of the national health but as, perhaps, the nearest approach thereto which is attainable in present circumstances, having regard more especially to the existing want of that complementary register of sickness, which cannot surely be delayed indefinitely, and the initiation of which we hope to see attempted at no distant date.

In reviewing the annual report for 1901, which is the first for which the present Registrar-General is responsible, we commented with approval on the circumstance that the opening of a new century had been chosen for the reconstruction of the entire work and for the revision of its statistical details in accordance with the requirements of modern science. But although the form has been modified in which the information contained in recent reports is presented it is reassuring to the statistical student to find that nothing has been omitted which may interfere with comparison of the present with the past. That this is the case may be verified by reference to the table of contents, which sets forth with precision the nature and extent of the information given in the book. In each of the volumes issued from the General Register Office since the specified date we have noticed a progressive improvement and this has been fully maintained in the volume now before us—a volume which, whether considered in relation to the care and accuracy with which it has been prepared or in relation to the extended scope of the work which now relates to foreign countries as well as our own, will compare favourably with any of its predecessors.

In his introductory remarks Sir William Dunbar draws attention to the fact that in the year 1905 a considerable amount of the information that in previous years had been reserved for the annual report was published in the "Summary" for that year, which was issued shortly after the close of the first quarter, so that this information was available to the public fully nine months earlier than in any previous year. For example, in the year 1905 provisional data concerning births, deaths, and marriages in the counties of England and Wales found a place in the annual summary for the first time, as also did the corrected rates of births and deaths for the metropolitan boroughs, the former rates being calculated, not as heretofore on the total population, but on that portion of the female population among whom births occur.

The Registrar-General devotes several pages to a discussion of the recently lowered fertility of English women and its consequent effect on the birth-rate. In the course of the last 35 years the fall in the English birth-rate has amounted to 23 per cent., but the changes in the sex and age constitution of the population have been so great that the birth-rate calculated by the crude method cannot be depended upon to give a fair measure of the amount of decrease that has actually occurred. The method has now therefore been employed of basing the calculation on the proportion of births to possible mothers—i.e., the women living at child-bearing ages. Measured in this way the fall in the birth-rate amounted to 29 per cent. If the fertility of married women in proportion to their numbers had been the same in 1905 as it was in 1870–72, then the legitimate births would have numbered nearly 1,169,000 instead of the 891,978 actually recorded. Approximately 17 per cent. of the decline in the birth-rate in the past 35 years is attributable to the decrease in the proportion of married women of conceptive ages, and about 10 per cent. more to the decrease of illegitimacy. With regard to the remaining 73 per cent. of the decrease, although a portion of the reduced fertility may be ascribed to changes in the age constitution of married women, there exists little doubt that the greater part of it is due to deliberate restriction of child-bearing on the part of the people themselves

Special tables have been prepared for the present report showing the effect of mortality among young children in modifying the birth-rates in different parts of the country. The general inference to be drawn from these tables is that a high birth-rate does not necessarily involve a larger effective addition to the population than does an average or even a low birth-rate, for in too many cases high birth-rates are associated with excessive sickness and mortality in the first few years of life, the result being that not only do less than a normal proportion of the children survive at the age of five years, but those who do survive have fallen below the standard of physical fitness.

Having done his best with the materials now at his command to trace to its true causes the impaired fertility of the female population we are gratified to find that Sir William Dunbar is by no means satisfied with the present system of birth registration. In a previous report the Registrar-General had acknowledged that the English registers of birth are capable of improvement. The present registers are defective chiefly in this respect, that the official forms contain no column for the entry either of the age of the mother at the birth of her child or of the number of children previously born to her. In these circumstances the Registrar-General is now considering "how far it is practicable to extend the registers so as to include these and other details which may in future facilitate closer investigation into the important question of the fertility of the English population and its relation to infantile mortality."

Sir William Dunbar may rest assured that this additional evidence of the keen personal interest which ever since his appointment he has shown in the work of his department will be appreciated generally, and by none more highly than by the members of our profession, to whom the Registrar-General has repeatedly acknowledged his indebtedness for assistance willingly rendered in the discharge of his important functions.

In the year 1876 the English birth-rate attained the highest point on record—viz., 36·3 per 1000 living, but since that date the ratio has almost steadily fallen, until in the year 1905 it was no more than 27·2. Some of the consequences of the decreasing birth-rate in this country are modified by a decreasing death-rate. Still the fact is significant that in the years 1880–82 there were no fewer than six other European countries in which the fertility of wives was less than that recorded in England and Wales, whereas 20 years later—namely, in 1900–02—the rate of fertility among English married women was, with the exception of France, lower than that

in any other European country. It is further noteworthy that in the year 1905 the rate of fertility among wives in this country had fallen below the level prevailing in New South Wales, and it may be remembered that the decline in the birth-rate in that colony was viewed with so much apprehension that a Royal Commission was appointed which, after full inquiry, reported on the causes that have contributed thereto and the effects of the restriction of child-bearing on the well-being of the Commonwealth.

The very full and elaborate statistics contained in the report show that although, on the one hand, the number of women of conceptive ages, in proportion to the total population, has increased in the two last decennia; on the other hand, the proportion of married women in this section of the female population has steadily decreased. The figures further show that the marriage-rate, based on that portion of the population among whom marriages take place, has fallen continuously, and that the age constitution of married women of child-bearing age has altered very materially.

(To be continued.)

ARMY MEDICAL DEPARTMENT REPORT FOR 1905.[1]

FIRST NOTICE.

THE issue of the medical report on the health of the army for 1905 has almost immediately followed that of the navy for the same year. Owing to newly devised schemes for the reorganisation and unification of our land forces with a view to the creation and future development of a national army with a due regard at the same time to national economy in military organisation, some fresh interest is lent at the present time to these medical reports. They are like what stocktaking is in big business concerns in enabling us to form some estimate and to institute some comparison between the general standard of the health and physique of the population from which an army draws its supplies and that of the army itself. In this respect that section of the report dealing with recruiting for the army throws a strong sidelight and opens up a field for further investigations of, it may be, a very useful and interesting nature. Colonel F. A. Davy, late R.A.M.C., for example, lecturing at the United Service Institution recently, recalled attention to a subject which he has long studied and written about—namely, the injurious effects of "setting-up" drill as practised by drill sergeants in the physical training of army recruits. Colonel Davy's contention is, we may say parenthetically, founded on sound physiological reasoning. Inasmuch as the attitude assumed by the recruit is one of swelling out the chest by forcibly holding his breath it must give rise to a disturbance of the normal balance existing between the pulmonary and circulatory systems. We must return, however, to the army medical report and will begin with the summary statement of the health and sanitary condition of the troops at home and abroad in 1905 as therein set forth.

The average strength of European troops serving at home and abroad in 1905 was 240,075 warrant officers, non-commissioned officers, and men. The total number of admissions to hospital was 141,849, the total deaths 1396, and the total number of men finally discharged from the service on account of disease and injuries was 3700. The admissions represent a ratio of 590·9 per 100 of strength and the deaths one of 5·61 per 1000, on a strength of 248,827. In 1904 the admission ratio was 653·1 and the death-rate 6·19 per 1000, while for the decennial period from 1895 to 1904 the corresponding ratios were 852·4 and 8·10 respectively. The principal causes of admission during the year were venereal affections, diseases of the digestive system, injuries, malarial fevers, diseases of the skin, and diseases of the respiratory system. The chief causes of death were enteric fever (282), injuries (258), diseases of the digestive system (175), diseases of the respiratory system, excluding tubercular disease of the lung (118), and diseases of the circulatory system (113). The invaliding records show that diseases of the circulatory system (739), diseases of the digestive system (558), diseases of the nervous system (495), diseases of organs of special sense (391), and tubercular diseases (356), head the list in the case of men finally discharged as unfit for further service. Malta fever, malarial fevers, and debility caused a great deal of invaliding from abroad but most of the men recovered sufficiently to retake their places in the ranks. The admission, mortality, and constantly sick-rates amongst the troops serving in the United Kingdom were 448·8, 2·73, and 26·39 per 1000 respectively, as compared with 506·7, 2·96, and 29·26 in 1904, and with 648·6, 4·20, and 37·42 the admission, death, and constantly sick-rates for the decennial period 1895–1904. The decrease in the admission-rate is partly due to the practice of treating cases in barracks.

Making a selection of some of the commands and confining our attention to a few of the more salient and interesting statistical results embodied in the summary, we may say that Gibraltar had a relatively low death-rate of 2·17 per 1000. There was a slight increase of admissions for enteric fever and there were three cases of Malta fever, as compared with none in the previous year.

In the Malta command enteric fever caused 64 admissions and 17 deaths. Malta fever, which is often a very long and serious disease and attended with troublesome complications, was very prevalent and much in excess of previous years. It caused 643 admissions and 16 deaths among the men, and 383 of the cases had to be invalided; 44 cases occurred among the officers, 21 were invalided and one died before reaching England; while there were 48 cases among the women with one death, and 15 cases among the children. In Bermuda the admission, mortality, and constantly sick rates were lower than in 1904. In the South African command, with an average strength of 18,593, the admission, mortality, and constantly sick rates were 474·2, 5·49, and 29·06 per 1000 respectively, showing a considerable decrease in each instance as compared with the corresponding rates in 1904. Enteric fever caused 231 admissions, 17 deaths, and the invaliding of 12 men as compared with 70 in 1904. The decline in the number of cases of enteric fever is attributed to improved sanitary conditions. There is also a fall in the rates of several other diseases.

In India the health of the troops was exceptionally good, the admission-rate being lower than that for any of the preceding 24 years. That scourge of our European garrison in that country, enteric fever, shows some decrease in the admission, mortality, constantly sick, and invaliding rates for 1905. There were only seven deaths from cholera and four from plague (out of 13 admissions). Dysentery caused 936 admissions and 33 deaths, as compared with 873 admissions and 29 deaths in 1904.

In Egypt the admission, mortality, and constantly sick rates were lower than in 1904 and were also lower than the decennial average rates.

(To be concluded.)

THE SPECIAL REPORT OF THE SELECT COMMITTEE UPON THE HOUSING OF THE WORKING CLASSES ACTS AMENDMENT BILL.

A Select Committee to which has been referred the Government Bill for Amending the Housing of the Working Classes Acts has "gone through the Bill and agreed to report the same without amendment," but it has at the same time added to this brief and formal finding a "special report" which is a far more interesting document. The report and special report have since been ordered by the House of Commons to be printed and with them the draft report of the chairman of the Select Committee, Sir John Dickson Poynder, various notes as to the sittings of the Committee, and extracts from the evidence before it illustrative of points which have struck it as specially worthy of attention. The Bill itself is directed towards encouraging, or at all events facilitating, the application of Part III. of the Housing of the Working Classes Act of 1890 to rural districts by giving greater powers to rural district councils.

The Housing of the Working Classes Act, 1890, had for its object, as its title indicates, the improvement of the dwellings of the working classes, and a portion of the Act, known as Part III., sought to bring this about by enabling local authorities to acquire sites and to build houses. The powers thus given have been exercised in urban districts but in the country the Act has effected little or nothing, although in rural districts the dwellings of the working poor are frequently of a highly insanitary nature or do not exist in spite of a demand for such accommodation.

Under the present law a rural district council cannot adopt Part III. of the Housing of the Working Classes Act, 1890, without the consent of the county council. The Bill proposes to remove this restriction and to substitute for Part III. of the Act referred to Part I. of the Bill giving

[1] Army Medical Department Report for the Year 1905. Vol. XLVII. London: Printed for His Majesty's Stationery Office by Harrison and Sons, St. Martin's-lane, Printers in Ordinary to His Majesty. 1906. Price 2s.

power to a rural district council to act directly in cases where the land can be acquired by agreement, and in other cases with the consent of the county council or the Local Government Board. The Bill, in short, is devoted to amending existing legislation so that machinery already supplied can be made use of by bodies which have not been allowed to set it in motion hitherto. The special report is devoted to an exposition of the causes which have combined in the past to prevent alike the amelioration of existing dwellings and the building of new ones under the Act of 1890, and to showing with tolerable plainness that in the opinion of the Select Committee these hindering causes are left untouched by the new measure. The rural district Council has had in its hands the power to bring about the amelioration of existing dwellings but the Select Committee points out that it is not, and is not likely to be, a body vigorous in the performance of such a duty and also that its executive officer, the medical officer of health (whom it appoints under the Public Health Act, 1875), and the inspectors who work under him, cannot do their duty effectively in the circumstances in which the law places them.

The Select Committee has not cloaked its meaning under polite paraphrases, it admits the existence of contributory causes for which no one is to blame, which have helped to render the Act of 1890, to use its words, "practically a dead letter in rural parishes," but in the same paragraph it says, "In the towns where public opinion is more acute the Acts have been in comparison more vigorously administered. But the authorities who have been entrusted with the carrying out of the Acts in rural districts have, generally speaking, deplorably failed to carry out their obligations." It dwells in some well-considered paragraphs upon the difficulties arising out of the want of direct profit to be extracted from cottage property so far as owners of large properties are concerned, but it also calls attention to the indifference of owners "of a class little removed from the station in life of their tenants, to whom cottage property appeals as a safe investment and who are indisposed to curtail their profits," adding, "When the owners of village slum property find it a profitable investment there is a strong disinclination to attract attention to the need for more and better cottages, as in the event of these being provided the bad cottages would become unoccupied. On many rural district councils members may be found who are interested in property of this character." This hardly indicates confidence on the part of the committee that so far as the rural district council is concerned the new measure will accomplish more than the predecessors which it amends, and indeed it recommends on another page that the more powerful county council should hold concurrently with the rural district council the power to erect buildings under Part III. of the Act of 1890. If, however, the hesitancy of the member of the small local council to diminish the value of his own property, to increase his own rates, or possibly to offend his powerful neighbours has operated so as to nullify the salutary powers which Parliament has given him, the committee is fully aware that it has done so by enabling him to check the flow of reform at its fountain head. The responsibility for exposing abuses, for demanding improved sanitation in existing buildings or suggesting the desirability of new ones, has rested, and will still rest under the amending Act, with the medical officer of health and with the inspectors of nuisances who work under him and are appointed by those very councils to the "general lethargy" of which the Select Committee calls attention. The observations of the committee upon the position of the medical officer of health in rural districts should be studied by every Member of Parliament who has the welfare of the rural community at heart and by everyone who can bring influence to bear in his direction. They do not contain much new matter; other similar inquiries have thrown light in like manner upon the difficulties which attend upon the improvement of the homes of the poor in towns as well as in the country, and to these the committee refers. It expresses its views, however, with commendable clearness and that which it has placed upon record is the last and weightiest utterance upon the subject, laid, it is to be hoped, before a Government powerful enough to act itself with the vigour which it desires to instil into others. With regard to the position of the medical officer of health appointed by a rural district council the committee points out that he is usually occupied as such during part of his time only and is dependent upon his private practice to supplement his salary, and that where his duty impels him to call attention to housing reform he has to bring it to the notice of employers to whom for the reasons given above the subject is a distasteful one, and that it may become his duty to urge that legal proceedings should be taken by, or against, persons who in his private capacity may be his patients.

Cordial assent should be given to the words of the report where it says: "The medical officer of health should have no private practice, not only because it is necessary that he should devote his whole attention to such important matters as housing, overcrowding, and sanitary inspection, but also because no one should be put in the position of having to choose between neglecting a due enforcement of the law and running the risk of injuring his own prospects by making suggestions or taking action disagreeable to those who might otherwise consult him as their physician. By placing sanitary matters under the inspection of capable and disinterested officials influenced by no local prejudice or interests, greater uniformity and efficiency in administration will be secured." The Royal Commission on Labour made a similar proposal to that of the committee which quotes a passage from its report in direct support of its own view that the medical officer of health in rural districts should be appointed by the county council and removeable only with the consent of the Local Government Board, his whole time being occupied by a wider district than that in which at present he is employed and paid for by a salary which a small sanitary district would not be able to afford. The keeping of a register of all houses below a certain value with particulars of their sanitary condition is a new duty which the committee recommends to be imposed upon the medical officer of health and the inspectors under him.

With regard to the inspector of nuisances the committee recommends that he should be given the title of sanitary inspector, as has been the case in London since the Public Health (London) Act, 1891, came into force, and that his duties should in due course become widened to include the preventive measures which such a designation suggests. At present he is frequently a man untrained in sanitary matters, who combines his office with that of road surveyor at relative salaries suggestive of the small importance attached to his duties under the medical officer of health. Thus in one district mentioned in the evidence appended to the special report an inspector who before his appointment was a farmer holds no certificate from the Royal Sanitary Institute or from any similar body and receives from the district council about £170 a year, of which £55 only are paid to him in respect of sanitary work. In another each of two inspectors receives £30 a year as such and £120 as surveyors of highways. The Select Committee recommends that sanitary inspectors, as well as medical officers of health, should be thoroughly qualified men, appointed by the county council, paid for their whole time, and holding their appointments during good behaviour and until removal by the Local Government Board. In the chairman's draft report we find the following suggestive recommendation: "An expert staff of qualified inspectors of the kind above indicated would make themselves familiar with the housing and sanitary conditions of their respective areas and by their official and unofficial activities create a more critical public opinion upon the whole question. By the expression 'unofficial activities' the committee mean to indicate that an experienced official of professional standing, armed with the means of putting legal and compulsory machinery in motion, might do much in the way of personal intercourse and advice and other informal methods to bring about reforms under the Public Health and Housing Acts, none the less effectual because official action was obviated. The real worth and value of an efficient inspector would, it may be confidently anticipated, be more fairly measured, not so much by the number of notices or summonses that he served or caused to be issued, as by the number that by personal persuasion he had avoided issuing. A great advantage would ensue which owners should welcome. Indeed, it may be safely said that a large part of the most useful work of such an official would not appear on official record at all." We entirely concur with the views of the Select Committee as to what the positions of the medical officer of health and the sanitary inspector should be and we believe that by legislation in the direction which it has indicated and in no other way hitherto propounded can wholesome homes be obtained for the rural population. That it is the duty of the nation to see that such homes are provided is a point which we need not argue and we can leave those who study the

report upon which we have commented to follow its reasoning and to discuss its facts for themselves. These bear upon the question of the possible bringing back of the labourer to the land or of retaining there a healthy, self-respecting, and decent population, in spite of the glamour of higher wages and future advancement by which at present he is attracted to cities already overcrowded.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8592 births and 6431 deaths were registered during the week ending Feb. 9th. The annual rate of mortality, which had been equal to 18·1, 18·2, and 19·8 per 1000 in the three preceding weeks, further rose to 20·9 in the week under notice. During the first six weeks of the current quarter the death-rate in these towns averaged 20·0 per 1000, the rate during the same period in London being 20·6. The lowest annual death-rates in the 76 towns during the week were 9·5 in Handsworth, 9·9 in Hornsey, 10·8 in Stockton, and 11·5 in Tottenham; the rates in the other towns ranged upwards to 29·5 in Merthyr Tydfil, 30·2 in Wolverhampton, 30·5 in Swansea, and 33·4 in Rotherham. The 6431 deaths in the 76 towns showed a further increase of 334 upon the numbers returned in the three previous week, and included 466 which were referred to the principal epidemic diseases, against 416 and 450 in the two preceding weeks; of these, 150 resulted from whooping-cough, 131 from measles, 81 from diphtheria, 45 from diarrhœa, 34 from scarlet fever, 24 from "fever" (principally enteric), and one from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 1·5 per 1000 in the 76 towns, the rate from the same diseases in London being 1·3. No death from any of these epidemic diseases was registered last week in Burnley, Northampton, Hornsey, Ipswich, or in ten other of the 76 towns; the annual death-rate therefrom, however, ranged upwards to 5·1 in Middlesbrough, 5·3 in Bury, 6·7 in Rotherham, and 7·9 in St. Helen's. The 150 fatal cases of whooping-cough showed a further increase of six upon the numbers returned in the five preceding weeks, and caused an annual rate of 2·1 in Walthamstow, 2·5 in Rotherham, 2·6 in Leyton and in Middlesbrough, 2·8 in Willesden and in Newport (Mon.), and 3·4 in Barrow-in-Furness. The 131 deaths from measles also showed a further increase upon recent weekly numbers, the highest rates therefrom being 2·2 in Grimsby, 3·0 in West Bromwich, 3·3 in Rotherham, and 6·8 in St. Helen's. The 81 deaths referred to diphtheria also showed an increase and were proportionally most numerous in Handsworth. The fatal cases of fever, on the other hand, were fewer than in any previous week, but included two both in Walsall and in Wigan. Scarlet fever caused five deaths in Liverpool and four in Manchester and Salford. The fatal case of small-pox occurred in Southampton. No case of small-pox has been under treatment in the Metropolitan Asylums Hospitals since the end of June last. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had steadily declined in the six preceding weeks from 3846 to 3176, had further fallen to 3059 at the end of the week under notice; 311 new cases were admitted to these hospitals during the week, against 307 and 319 in the two previous weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 446, 484, and 515 in the three preceding weeks, further rose to 526 in the week under notice, and exceeded the corrected average in the corresponding week of the last five years by 167. The causes of 65, or 1·0 per cent., of the deaths registered during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, West Ham, Newcastle-on-Tyne, Salford, Leicester, and in 41 other of the 76 towns; the proportion of uncertified deaths, however, again showed marked excess in Liverpool, Bootle, St. Helen's, Rochdale, Preston, Sheffield, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 19·1 and 20·5 in the two preceding weeks, further rose to 23·0 in the week ending Feb. 9th, and exceeded by 2·1 the mean rate during the same week in the 76 English towns. The rates in the eight Scotch towns ranged from 18·2 and 19·5 in Aberdeen and Perth to 25·9 in Paisley and 28·1 in Leith. The 800 deaths in the eight towns showed a further increase of 88 upon the numbers in the two previous weeks, and included 105 which were referred to the principal epidemic diseases, against 71 and 85 in the two preceding weeks. These 105 deaths were equal to an annual rate of 3·0 per 1000, which exceeded the rate from the same diseases in the 76 English towns by 1·5; they included 36 which were referred to whooping-cough, 33 to "fever," 15 to diarrhœa, 13 to diphtheria, six to measles, two to scarlet fever, and not one to small-pox. The 36 fatal cases of whooping-cough showed a marked increase, and included 24 in Glasgow, seven in Aberdeen, and three in Edinburgh. Of the 33 deaths referred to "fever" (against 19, 25, and 27 in the three previous weeks), 24 occurred in Glasgow, five in Edinburgh, two in Paisley, and one each in Dundee and Leith; all the 24 fatal cases in Glasgow, four of the five in Edinburgh, and one each in Dundee, Paisley, and Leith were certified as cerebro-spinal meningitis. Of the 15 deaths attributed to diarrhœa seven were returned in Glasgow, three in Dundee, and two in Edinburgh. Diphtheria caused four deaths in Glasgow, three in Edinburgh, and two in Dundee; and of the six fatal cases of measles three occurred in Aberdeen and two in Glasgow. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 134 and 125 in the two previous weeks, rose to 178 in the week under notice, and exceeded the number in the corresponding week of last year by 70. The causes of 28, or 3·5 per cent., of the deaths registered in the eight towns during the week were not certified or not stated; the mean proportion of uncertified deaths in the 76 English towns during the same week did not exceed 1·0 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 28·6 and 24·8 per 1000 in the two preceding weeks, rose again to 28·6 in the week ending Feb. 9th. During the first six weeks of the current quarter the death-rate in the city averaged 28·4 per 1000, the mean-rate during the same period being 20·6 in London and 20·5 in Edinburgh. The 214 deaths of Dublin residents during the week under notice showed an increase of 28 upon the number in the previous week, and included 14 which were referred to the principal epidemic diseases, against but seven and four in the two previous weeks. These 14 deaths were equal to an annual rate of 1·9 per 1000, and included five from whooping-cough, four from measles, two from diarrhœa, two from "fever," one from scarlet fever, and not one either from diphtheria or small-pox. The fatal cases both of whooping-cough and measles showed a considerable increase. Ten inquest cases and five deaths from violence were registered during the week; and 71, or 33·2 per cent., of the deaths occurred in public institutions. The causes of nine, or 4·2 per cent., of the deaths registered in the city during the week were not certified; the percentage of uncertified deaths in the week under notice did not exceed 0·3 in London and was equal to 6·1 in Edinburgh.

VITAL STATISTICS OF LONDON DURING JANUARY, 1907.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·9 per 1000 of the population, estimated at 4,758,218 persons in the middle of the year. In the three preceding months the rates had been 11·1, 9·5, and 7·5 per 1000 respectively. The lowest rates last month were recorded in the City of London, the City of Westminster, St. Pancras, Holborn, Poplar, and Lambeth; and the highest rates in Fulham, Bethnal Green, Bermondsey, Deptford, Greenwich, and Woolwich. The prevalence of scarlet fever, which had shown a continued decline in the two preceding months, decreased still further during January; among the various metropolitan boroughs this

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JANUARY, 1907.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1907.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,758,218	1	1650	787	1	146	4	24	513	—	3126	6·9	—	133	47	91	183	—	34	—	82	570	1·2	9016	19·9	142
West Districts.																										
Paddington	149,909	—	79	21	—	5	—	—	17	—	122	8·5	—	1	—	4	3	—	1	—	1	10	0·7	252	17·5	117
Kensington	181,842	—	47	19	—	5	—	—	16	—	87	5·0	—	1	3	2	8	—	2	—	1	17	1·0	313	18·0	150
Hammersmith	122,337	—	46	30	—	2	—	—	11	—	89	7·6	—	—	1	1	1	—	1	—	2	6	0·5	219	18·7	99
Fulham	166,749	—	81	47	—	7	—	4	13	—	152	9·5	—	2	1	11	16	—	—	—	8	38	2·4	309	19·3	179
Chelsea	74,857	—	16	15	—	—	—	—	8	—	39	5·4	—	—	—	1	—	—	1	—	3	5	0·7	143	19·9	155
City of Westminster	172,219	—	34	20	—	6	—	—	7	—	67	4·1	—	1	3	4	1	—	1	—	2	12	0·7	313	19·0	158
North Districts.																										
St. Marylebone	127,718	—	34	8	—	7	—	2	19	—	70	5·7	—	—	1	2	1	—	1	—	1	6	0·5	255	20·8	94
Hampstead	91,137	—	33	17	—	—	—	—	6	—	56	6·4	—	—	—	3	1	—	1	—	1	6	0·7	104	11·9	73
St. Pancras	236,753	—	50	29	—	1	—	—	14	—	94	4·1	—	—	2	—	7	—	—	—	3	12	0·5	480	21·1	104
Islington	347,017	—	100	42	—	11	—	3	36	—	192	5·8	—	1	3	1	13	—	—	—	6	24	0·7	714	21·5	175
Stoke Newington	53,613	—	14	5	—	—	—	—	7	—	26	5·1	—	—	1	1	1	—	—	—	1	4	0·8	79	15·4	188
Hackney	232,993	—	84	42	—	4	—	1	38	—	169	7·6	—	3	3	2	12	—	3	—	5	28	1·3	425	19·0	171
Central Districts.																										
Holborn	55,134	—	5	7	—	1	—	—	2	—	15	2·8	—	—	—	1	1	—	—	—	1	3	0·6	115	21·8	171
Finsbury	96,732	—	16	14	—	4	—	2	14	—	50	5·4	—	—	—	—	10	—	—	—	—	10	1·1	229	25·8	174
City of London	20,310	—	4	—	—	1	—	—	1	—	6	3·1	—	—	—	—	—	—	1	—	—	1	0·5	40	20·5	79
East Districts.																										
Shoreditch	115,662	1	47	18	—	4	—	1	15	—	86	7·8	—	9	3	3	11	—	2	—	2	20	2·7	306	27·6	157
Bethnal Green	130,831	—	60	21	—	3	—	1	26	—	111	8·8	—	3	3	1	7	—	—	—	2	16	1·3	290	23·1	132
Stepney	308,525	—	94	50	1	20	—	1	41	—	207	7·0	—	47	2	8	5	—	3	—	5	70	2·4	629	21·2	115
Poplar	171,066	—	29	24	—	4	—	2	17	—	76	4·6	—	12	—	6	1	—	3	—	3	25	1·5	346	21·1	103
South Districts.																										
Southwark	208,781	—	95	37	—	17	—	1	24	—	174	8·6	—	1	5	4	21	—	4	—	6	41	2·0	475	23·6	165
Bermondsey	128,263	—	70	22	—	10	—	—	20	—	122	9·9	—	3	5	1	5	—	1	—	3	18	1·5	308	25·0	145
Lambeth	318,538	—	87	33	—	6	1	—	21	—	148	4·8	—	—	2	6	16	—	—	—	9	33	1·1	586	19·2	136
Battersea	181,736	—	83	30	—	1	—	2	20	—	136	7·8	—	1	—	4	3	—	—	—	1	9	0·5	261	15·0	124
Wandsworth	281,419	—	95	55	—	4	1	2	25	—	182	6·7	—	2	1	7	7	—	1	—	3	21	0·8	431	16·0	111
Camberwell	277,029	—	94	35	—	10	—	1	31	—	171	6·4	—	8	5	3	15	—	2	—	3	36	1·4	537	20·2	165
Deptford	116,510	—	49	40	—	1	2	1	22	—	115	10·3	—	—	1	6	3	—	2	—	3	15	1·3	225	20·1	160
Greenwich	107,222	—	64	27	—	3	—	—	7	—	101	9·8	—	4	—	2	—	—	1	—	1	8	0·8	174	16·9	138
Lewisham	152,532	—	49	37	—	6	—	—	18	—	110	7·5	—	1	1	4	12	—	1	—	4	23	1·6	268	18·3	148
Woolwich	129,336	—	91	42	—	3	—	—	17	—	153	12·3	—	33	1	3	2	—	2	—	2	43	3·5	260	21·0	155
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

disease was proportionally most prevalent in Paddington, Fulham, Bermondsey, Greenwich, and Woolwich. The Metropolitan Asylums hospitals contained 3116 scarlet fever patients at the end of last month, against 4111, 4003, and 3787 at the end of the three preceding months; the weekly admissions averaged 299, against 543, 430, and 328 in the three preceding months. Diphtheria was slightly less prevalent than it had been in December; the greatest proportional prevalence of this disease was recorded in Hammersmith, Fulham, Deptford, Greenwich, Lewisham, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums hospitals, which had been 1062, 1075, and 995 at the end of the three preceding months, had further declined to 921 at the end of last month; the weekly admissions averaged 124, against 175, 153, and 128 in the three preceding months. The notified cases of enteric fever showed a further decline in January from the numbers in the preceding three months; among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, St. Marylebone, Stepney, Southwark, and Bermondsey. There were 100 enteric fever patients remaining under treatment in the Metropolitan Asylums hospitals at the end of last month, against 200, 161, and 134 at the end of the three preceding months; the weekly admissions averaged 14, against 34, 24, and 18 in the three preceding months. The greatest proportional prevalence of erysipelas was recorded in St. Marylebone, Hackney, Finsbury, Bethnal Green, Bermondsey, and Deptford. The 24 cases of puerperal fever notified during the month included four belonging to Fulham, three to Islington, and two each to St. Marylebone, Finsbury, Poplar, Battersea, and Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ending Feb. 2nd the deaths of 9096 persons belonging to London were registered, equal to an annual rate of 19·9 per 1000; in the three preceding months the rates had been 13·6, 14·7, and 18·3 per 1000. The death-rates last month ranged from 11·9 in Hampstead, 15·0 in Battersea, 15·4 in Stoke Newington, 16·0 in Wandsworth, and 16·9 in Greenwich to 23·1 in Bethnal Green, 23·6 in Southwark, 25·0 in Bermondsey, 25·8 in Finsbury, and 27·6 in Shoreditch. The 9096 deaths from all causes in London last month included 570 which were referred to the principal infectious diseases; of these, 133 resulted from measles, 47 from scarlet fever, 91 from diphtheria, 183 from whooping-cough, 34 from enteric fever, and 82 from diarrhœa. The lowest death-rates from these diseases in the aggregate were 0·5 per 1000 in the City of London, in Hammersmith, in St. Marylebone, in St. Pancras, and in Battersea, and 0·6 in Holborn; the highest rates were 2·0 in Southwark, 2·4 in Fulham and in Stepney, 2·7 in Shoreditch, and 3·5 in Woolwich. The 133 deaths from measles were 73 below the average number in the corresponding periods of the five preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Shoreditch, Stepney, Poplar, Greenwich, and Woolwich. The 47 fatal cases of scarlet fever showed a decline of six from the corrected average number; the greatest proportional mortality from this disease was recorded in Shoreditch, Bethnal Green, Southwark, Bermondsey, and Camberwell. The 91 deaths from diphtheria were slightly in excess of the average number in the corresponding periods of the five preceding years; among the various metropolitan boroughs diphtheria was proportionally most fatal in Fulham, Hampstead, Poplar, Deptford, and Lewisham. The 183 fatal cases of whooping-cough were slightly fewer than the corrected average number; the highest death-rates from this disease last month were recorded in Fulham, Finsbury, Shoreditch, Southwark, and Lewisham. The 34 deaths from "fever" were four above the average number for the corresponding periods of the five preceding years; of these 34 deaths four belonged to Southwark, three to Hackney, three to Stepney, three to Poplar, and two each to Kensington, Shoreditch, Camberwell, Deptford, and Woolwich. The 82 fatal cases of diarrhœa showed a slight excess over the corrected average number; this disease was proportionally most fatal in Fulham, Chelsea, Southwark, Lambeth, Deptford, and Lewisham. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 16 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 142 per 1000. The lowest rates of infant mortality were recorded in Hammersmith, St. Marylebone, Hampstead, St. Pancras, the City of London, and Poplar; and the highest rates in Kensington, Fulham, Islington, Stoke Newington, Finsbury, and Shoreditch.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeon: E. G. E. O'Leary to the *Defiance*. Civil Practitioners: J. L. Owens to be Surgeon and Agent at Holyhead and A. E. Carruthers to be Surgeon and Agent at Rhosneiger.

The undermentioned Staff Surgeons have been promoted to the rank of Fleet Surgeon in His Majesty's Fleet: Thomas Christopher Meikle, Joseph Cudlip Wood, Horace Bruce Marriott, Norman Lloyd Richards, Ernest Alfred Penfold, Ernest James Finch, John Kirkup Robinson, and Hugh Clift (dated Feb. 11th, 1907).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel H. L. Battersby, from Ranikhet, India, is appointed to Hounslow for duty. Major J. H. E. Austin proceeds to Hounslow for duty. Captain L. M. Purser joins at Woolwich. Major J. Ritchie, from the Straits Settlements, is appointed to the Eastern Command for duty. Lieutenant-Colonel M. O'D. Braddell, Captain H. P. Barrow, Captain A. H. Safford, and Captain A. D. Jameson have left Woolwich.

Lieutenant-Colonel Eugenius A. Roche retires on retired pay (dated Feb. 13th, 1907). Major Harry St. G. S. Hore is placed on retired pay (dated Feb. 5th, 1907). Major George A. Wade retires on retired pay (dated Feb. 13th, 1907).

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions:—To be Colonel: Lieutenant-Colonel Walter Gawen King, C.I.E. (dated April 29th, 1906). To be Lieutenants (dated Sept. 1st, 1906): John Taylor, Alexander Dron Stewart, Claude Harold Cross, Robert Alexander Chambers, Robert Henry Bott, John Morison, Samuel George Steele Haughton, Francis William Cragg, Norman Niel George Cowan McVean, Norman Skinner Simpson, Shumshere Singh, Robert Francis Hebbert, Joseph Frain James, James Smalley, Charles Michael Roberts, Andrew Smith Leslie, William Malcolm Thomson, Alexander Patrick Gordon Lorimer, Herbert Bodley Scott, George McGregor Millar, Hubert Astley Knight, Francis Hugh Salisbury, Frederick Charles Fraser, and Harold Hay Thornburn.

VOLUNTEER CORPS.

Rifle: 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: Captain Ernest Paul Alphonse Mariette from the Devon Bearer Company, Royal Army Medical Corps (Volunteers) to be Surgeon-Captain (dated Nov. 7th, 1906). 3rd Volunteer Battalion the South Wales Borderers: Edward Meredith Griffith (late Captain) to be Surgeon-Lieutenant (dated Nov. 2nd, 1906).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Scottish Command: Glasgow Companies: Captain F. J. Charteris resigns his commission (dated Jan. 31st, 1907). Archibald Jubb to be Lieutenant (dated Feb. 1st, 1907).

Devon Bearer Company: Supernumerary Surgeon-Captain Ransom Pickard from the 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment, to be Captain (dated Nov. 7th, 1906).

DEATHS IN THE SERVICES.

Deputy Inspector-General George Curtis, R.N., retired, at Port St. Mary, Isle of Man, on Feb. 1st, in his sixty-fifth year. He entered the service as surgeon in 1861, was promoted to staff surgeon in 1875, to fleet surgeon in 1882, and retired in 1895 with the honorary rank of deputy inspector-general of hospitals and fleets.

THE ROYAL MEDICAL WARRANT AND THE ARMY ORDERS FOR FEBRUARY.

We would call the attention of officers of the Army

Medical Service to the Army Orders for the present month (February) in which are set forth the terms of a Royal Warrant, dated Jan. 9th, amending the warrant of March 19th, 1906, in accordance with new provisions and with a view to giving a practical and working effect to them. In addition to dealing with promotion, rates of pay, half- and retired-pay, and other matters directly concerning the Army Medical Department, the Army Orders for February detail the new arrangements relating to the administrative staff with the apparent object of simplifying and confirming the new system of army administration which has grown up and been practically established. Last, but by no means least, all the regulations connected with a new and very extended system of instruction in sanitation throughout the army are set forth, together with what may be termed the machinery to be employed for that purpose.

INSTRUCTION IN ARMY SANITATION.

Under the new system which has already been, or is hereafter to be, carried out this instruction in sanitation—which will be of one kind and another and varied and adapted to circumstances and to the nature and intelligence of those to whom it is given—will become very widely diffused throughout all ranks and grades of the army. Lectures are to be given and examinations instituted. A manual of sanitation has been prepared and will be issued to all concerned. Instructions and examinations will be primarily based upon this manual. On mobilisation being ordered a sanitary inspection committee will be formed for service in the field consisting of a combatant officer as president, a field officer (Royal Engineers), and a field officer (Royal Army Medical Corps) as members. The committee will act under the orders of the general officer commanding in chief. The duties of this committee are fully set forth.

PARKES MEMORIAL PRIZE.

The prize of 75 guineas and the bronze medal of the Parkes Memorial Fund for 1906 have been awarded to Major F. Smith, D.S.O., R.A.M.C., for his essay on "The Sanitary Requirements of Naval and Military Units in Peace and War; with Suggestions for Complete Schemes of Sanitary Organisation suitable for both Navy and Army." The subject for the next competition is: "The Part played by Blood-sucking Insects in the Causation and Spread of Disease in Man, and the Measures to be recommended for the Prevention of such Diseases." Essays (which must include the results of personal observation and research) must reach the secretary of the prizes committee, Royal Army Medical College, Examination Hall, Victoria Embankment, London, W.C., on or before Dec. 31st, 1909. They must bear a brief motto and be accompanied by a sealed envelope similarly superscribed containing the name and address of the author. The competition is open to the medical officers of the Royal Navy, Army, and Indian services of executive rank on full pay, with the exception of the professors and assistant professors of the Royal Army Medical College and Royal Naval Hospital, Haslar, during their term of office. The successful essay becomes the property of the prizes committee. The authors of unsuccessful essays can have them returned on application to the secretary, the prizes committee, under their respective mottoes, giving an address to which they wish the essays to be sent.

INTERNATIONAL CONFERENCE OF RED CROSS SOCIETIES.

The British Red Cross Society gives notice that the Eighth International Conference of Red Cross Societies will be held in London from June 10th to 14th next inclusive. The International Conferences take place every five years, the last having been held at St. Petersburg in 1902. All Red Cross societies established in countries the Governments of which are signatory to the Geneva Convention are invited to send delegates to the conference and many have already signified their intention of being represented. Invitations to send official delegates have been forwarded through the Foreign Office to the Governments of the countries in question. The Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England has kindly placed the Examination Hall, Victoria Embankment, at the disposal of the conference. Field-Marshal Earl Roberts, K.G., V.C., will act as president of the conference. The business arrangements of the conference are being made by a committee composed of Mr. J. Danvers Power (chairman), Sir Frederick Treves, and Sir Benjamin Franklin. All communications should be addressed to the Secretary, British Red Cross Society, 9, Victoria-street, London, S.W.

JAPAN AND THE RED CROSS.

Lieutenant-Colonel W. G. Macpherson, M.B. Edin., C.M.G., R.A.M.C., attached to the department of military operations, read an interesting and instructive paper last week at the United Service Institution on the Rôle of the Red Cross Societies in Peace and War. By way of illustration he dwelt upon what had been done by the patriotism of Japan in her late war with Russia. Lieutenant-Colonel Macpherson having been officially present with the Japanese forces in Manchuria and elsewhere was able to speak from personal experience about the organisation and resources of the Red Cross Society of that country and as to the ease and excellence with which the Japanese hospital and sick transport systems had worked in actual war. Lieutenant-Colonel Macpherson, it will be remembered, had previously contributed some very useful and informing articles on these subjects to the *Journal of the Royal Army Medical Corps*.

THE ROYAL NAVY LIST.

The current issue of this publication, which contains trustworthy information with reference to the war and meritorious services of officers on the active and retired lists of the Royal Navy and Royal Marine forces, maintains its high standard as a work of reference. The work is now so well known that it is not necessary to give an account of its contents, but we may mention that the article entitled "The Current History of the Royal Navy" contains a summary of the accidents which have taken place in the service during the past three months. The Biograph of Naval Literature is very complete. The publishers of the List are Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill, E.C.

ROYAL ARMY MEDICAL CORPS VOLUNTEERS (LONDON COMPANIES).

On Feb. 9th Major-General Lord Cheylesmore, at the headquarters, Calthorpe-street, Gray's Inn-road, presented the prizes won by members of the Royal Army Medical Corps Volunteers (London Companies), during the past year. Lord Cheylesmore, in replying to a vote of thanks, congratulated the corps on the work of the past year, but regretted that the number of the corps was not greater. The falling off in numbers he attributed to the reaction after the war and uncertainty as to the future of the Auxiliary Forces. With regard to recruiting, he added that he would be only too pleased to do anything he could to get medical students to join that most excellent corps.

PHYSICAL TRAINING IN THE ARMY.

Orders have been issued from the War Office to the effect that, pending the issue of a revised Manual of Physical Training, the instruction is to be carried out on the proposed new lines. The teaching of the old physical training exercises, including physical drill with arms, is to be discontinued, while the physical training of recruits is to be confined to one hour a day.

THE SECOND INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.—We have already announced that the Second International Congress on School Hygiene will be held in the University of London (Imperial Institute, City Technical College, South Kensington) from August 5th to 10th next. It may, however, be useful to repeat the following details. Sir Lauder Brunton will preside. The honorary general secretaries are Dr. James Kerr and Mr. E. White Wallis. The congress will be divided into the following sections: (1) The Physiology and Psychology of Educational Methods and Work; (2) Medical and Hygienic Inspection in School; (3) the Hygiene of the Teaching Profession; (4) Instruction in Hygiene for Teachers and Scholars; (5) Physical Education and Training in Personal Hygiene; (6) Out of School Hygiene, Holiday Camps and Schools, the Relations of the Home and the School; (7) Contagious Diseases, Ill Health, and other Conditions affecting Attendance; (8) Special Schools, including those for Feeble-minded and Exceptional Children; (9) Special Schools for Blind, Deaf, Dumb, Crippled, and Invalid; (10) Hygiene of Residential Schools; and (11) the School Building and its Equipment. An exhibition of school building and furnishing appliances will be held in connexion with the congress. Full particulars and programme of the meetings can be obtained at the offices, Royal Sanitary Institute, Margaret-street, London, W.

Correspondence.

"Audi alteram partem."

PROPOSED AMALGAMATION OF THE LONDON MEDICAL SOCIETIES.

To the Editors of THE LANCET.

SIRS,—By the kind permission of the President of the Royal College of Physicians of London a general meeting of the societies which are taking part in the amalgamation will be held at the College on Tuesday next, Feb. 19th, at 5 P.M. The chief object of this meeting is to determine the name of the new society. The committee of representatives hopes that all members of the societies taking part in the amalgamation who desire to become members of the new society, or of any of its sections, will make an effort to attend.

We are, Sirs, yours faithfully,

ARTHUR LATHAM,
HERBERT S. PENDLEBURY, } Honorary Secretaries.

Feb. 12th, 1907.

SOME SUGGESTIONS WITH REGARD TO "CANCER" RESEARCH.

To the Editors of THE LANCET.

SIRS,—A perusal of the recent reports and discussions on "cancer" research has induced me to make the following suggestions which as they may perhaps be useful I ask you to insert when you conveniently can. Whether or no it will in the end be an advantage in the research I will not say, but I note that by general consent the research is to be a collective one, and the individualistic element in it will be thus relatively reduced. This being so, some organisation of the collective research is necessary in order to secure some degree of conformity and a common purpose in the investigation; while this organisation must be so limited as not to restrict the freedom of the workers in search of the truth more than is absolutely necessary.

I therefore venture to suggest that some provisional definition be adopted which shall say what it is the workers are in search of; and we might take a hint from the framers of our Acts of Parliament and limit the suggested provisional definition to this "cancer" research only. Such a provisional definition does not, so far as I know, now exist. No doubt there does exist a general consensus of opinion that the "cancer" which is being studied is to be thought of as a malignant tumour, but it is not as yet accepted to mean all malignant tumours, for at least some so-called inflammatory swellings are by most of the investigators excluded, while carcinoma, sarcoma, and almost all the endless variety of the malignant new growths are included in the term whatever tissue they grow in, so that the words "cancer" and malignant tumour are not convertible one into the other, and the words tumour and malignant as used by the researchers both need some provisional definition. Doubtless malignancy is commonly held to mean destructibility and a tumour is thought to be a more or less autonomous swelling of a part with a local hyperplasia and metaplasia; but malignancy and destruction are also seen in some bacterially induced responses, and are then commonly excluded and put among inflammations for reasons which need justification, if that be possible. Such autonomy of a local hyperplasia is also seen without any malignancy, and even sometimes as a regular response to a local irritation; and a destruction of tissue elements by normal growing parts is common, and is not malignant although it has been so called. From the context it is not possible to gather any sufficiently exact idea of the sense in which the word "cancer" is used by the researchers, who themselves are not all in perfect agreement; so that it is obvious that a provisional definition for the purposes of the research would, if accepted, be of service, and would tend to prevent some confusions of thought and of work among the workers who should coöperate. Such a definition would, however, have to remain provisional for a long period, and would always be open to amendment, so that it would not be restrictive in its working or injurious to individual initiative.

It is not for me to attempt here to sketch a formula for a definition of this sort, as my views, which have been elsewhere expressed, are not in accord with those of most of the "cancer" researchers in respect of the relations of malignant tumours and inflammation, but I may with less hesitation indicate here some points which a suitable provisional definition of "cancer" for the research workers should include or exclude and some characters which, being not yet agreed upon, would require a separate and special consideration.

(*A*) Thus, it should include a brief description of the distinguishing characters of the growth by which a competent observer may recognise it and demonstrate it to others.

(*B*) It should exclude all such characters as, notwithstanding a certain resemblance to the included characters, are by a common agreement among the workers held to differ from them essentially. For example, tumours or local and more or less autonomous swellings which are thought to be of bacterial etiology and therefore inflammations, are usually excluded, even when they are obviously very malignant; but in such cases the reason determining such exclusion should be given and a justification attempted for the otherwise arbitrary separation of things which have so much in common that I myself do not separate them. It would not be right to exclude, as at one time some pathologists seemed disposed to do, such tumours as occasionally become reduced in size or end in recovery, but then the conception that all "cancers" are always and necessarily locally destructive and fatal could not be retained without qualification; and the recovery of some would have to be thought of as possible and not as an indication that the growth had been only an inflammation or a response to some known irritation. Similarly, the growths having more or less virulence as indicated by the speed of development and of spread would not be excluded.

(*C*) Those characters about which the "cancer" research workers are not all agreed will demand a no less careful consideration in some special mode by which the disagreements should be stated without bias. Thus, although the prevalent doctrine seems to be that these spreading growths are not infective though inoculable, yet some workers consider that in some ways they are so, and important evidence has been given in favour of this opinion, although the infective agent or influence has not been isolated or experimented with. The doctrine that "cancer" is not infectious cannot be put among the accepted included distinguishing characters or be quite excluded, but its position is among the disputed ones, whether it be regarded as fact or doctrine. The example given of this category must suffice, as it would be out of place here were I to attempt to frame a list of the more or less important facts and doctrines about which the "cancer" research workers at present differ among themselves.

It is noteworthy, however, that the "cancer" research is not only a collective one and more or less an organised one, but that its "purpose" is a general one, and it is directed towards the investigation of the generic pathological state or process which is more or less vaguely called "cancer," and not distinctly to any particular species or variety such as carcinoma, or sarcoma, or endothelioma, &c. This statement is true notwithstanding the fact that the work done on Jensen's tumour does take count of varieties and strains. For in this work most, if not all, the workers see in these growths mainly the characters of the genus "cancer" and very little indeed those which might be called specific. To me, however, it seems certain that the specification of the work on Jensen's tumour and its nearer allies has been very beneficial and has tended to a definiteness which was very much needed.

Assuming, then, although the point has been questioned, that a Jensen tumour is truly a "cancer" and that it presents us with all the essential characters thereof, it by no means follows that all its characters are of the generic type, for some of them may be only specific ones and signify only the qualities which distinguish the species. This truth seems to me to have been not always adequately remembered by all the research workers on the inoculation of these malignant tumours, when attempts have been made from their results to conclude broadly as to the generic characters of "cancer." I think one illustration of this may be seen in some of the attempts to deal with the age relations of "cancer" as well also as in some reports of cases which indicate the greater or less virulence of tumours in different growths. This latter character doubtless is often met with; but it is not generic any more than is the incidence

in relation to age; while it is certainly met with as a specific character sometimes, and then it is limited to that species or its near allies.

It is, perhaps, not prudent to omit here a caution to the effect that in the suggested provisional definition inferences or conclusions should not be confused with and placed as facts; that, for example, because no distinct evidence has as yet been found of the existence and etiological activity of any parasitic irritant in a "cancer" therefore it is not right to assert that such a factor is never present and cannot be operative. The care to avoid a definite negation on this point is the more important seeing that some authoritative pathologists, even some of those who deny parasitism in "cancer," do see in it proofs that some sort of irritation is concerned with its etiology. On similar general grounds the use of such an expression as "cancer" cell should be avoided as it does not signify a proven fact but an opinion.

The presumption which may well be imputed to me for making this suggestion I am not blind to, and in defence can but say that the confident hopes I have, that were it acted upon, good would follow are an excuse though not a justification.

I am, Sirs, yours faithfully,

Nottingham, Jan. 11th, 1907. W. H. RANSOM.

"PRODROMATA."

To the Editors of THE LANCET.

SIRS,—In your columns of November last Sir William Gowers animadverted on the prevalent error of taking "prodroma" as a nominative singular, and hence not a few writers had derived the queer plural of *prodromata*. Sir William Gowers was so good as to invite my opinion as to the alternative of "prodromas." I could not admit that "prodromas" was a tolerable alternative and I have suggested the familiar word "precursors" as equally expressive and quite grammatical.

However, my point to-day is not to labour this question but to show on the authority of a recent paper by Professor Ridgway[1] that we are far from being the only sinners in this kind. In the name Ancona the Romans took the Greek accusative Ἄγκωνα for a nominative singular. Again, the names of the Attic months ending in *-ων*—no doubt a genitive of the construction, "*the month of* (*understood*) *Βοηδρομίων*"—imposed themselves gradually as nominatives, and the Athenians actually declined them as such, altering the accent. The Latin *sestertium* affords a good parallel. Once more, Professor Ridgway tells us that the city name "*Philippi*"—declined by the Romans *Philippi -orum*—arose from accepting the primitive genitive Φίλιππος πόλις as a plural nominative. So the solecists who have invented *prodromata* are in no bad company.

I am, Sirs, yours faithfully,

Cambridge, Feb. 10th, 1907. T. CLIFFORD ALLBUTT.

HUMAN AND BOVINE TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—The report just issued by the Royal Commission is a splendid example of true scientific research and a lasting monument to the untiring patience and industry of the researchers. The two chief facts which have been established are: (1) the difference (whatever the degree may be) between bacilli of the *typus humanus* and the *typus bovinus*; and (2) that bacilli of the *typus bovinus* on entering the human body may set up active and fatal tuberculosis.

My researches during the last nine years, coupled with an exceptional clinical experience, led me to come to the same conclusion, and in 1903 I published a paper based on bacteriological work in which I succeeded in isolating *bovine* bacilli from the mesenteric glands of a child suffering from primary abdominal tuberculosis. So far as I know, this was the first occasion in this country in which such bacilli were isolated and demonstrated as corresponding with the bacilli found in Perlsucht. The conclusions come to by me in 1903 correspond very closely with those arrived at by the Commission and I have for the last four years published papers in THE LANCET urging the necessity of stamping out tuberculosis in dairy cattle as a means of preventing the disease in children. I believe that practically all surgical tuberculosis is the result of ingestion of bovine bacilli in food, and more especially milk in children.

There is only one point in the report on which I disagree, and that is in reference to the question of the identity of human and bovine bacilli. They say:—

> It is well known that in the case of many diseases caused like tuberculosis by a micro-organism, immunity against the disease may be secured by introducing into the body the micro-organism causing the disease in such a way and in such a small dose that the disease thereby set up is slight and transient. The results obtained in this way have been so striking as to lead to a general acceptance of the view that a micro-organism which can thus be used to produce immunity against a particular disease may be regarded as identical with the micro-organism causing that disease. Hence, if the bacillus of human tuberculosis can be used to confer immunity against bovine tuberculosis or *vice versâ* we are supplied with a further proof of the identity of the two diseases.

I venture to submit that tuberculosis cannot be classed with the ordinary diseases caused by pathogenic organisms, either in its mode of onset or the course which it takes. It is now established that cattle can only be rendered immune from bovine tuberculosis by injecting small and repeated doses of *human* tubercle, and that all efforts to immunise them by injections of bovine tubercle have signally failed. This clearly shows to my mind a difference (whatever it may be) between human and bovine bacilli, supported in a great measure by the fairly uniform cultural appearances observed between the two bacilli.

I believe Koch to be right in asserting that bovine bacilli cannot set up *human* tuberculosis, but it *can* set up serious and fatal bovine tuberculosis in man, for the simple reason that the human body is susceptible to attack by both human and bovine bacilli, as proved by the Commission; hence the enormous importance of safeguarding our milk- and meat-supply. I sincerely hope that this excellent report will be immediately followed by legislative measures which will insure so far as possible the purity of milk.

I am, Sirs, yours faithfully,

Liverpool, Feb. 11th, 1907. NATHAN RAW.

To the Editors of THE LANCET.

SIRS,—Article 15 of the Dairies, Cowsheds, and Milkshops Order of 1885 provides that the milk of a cow suffering from certain diseases—of which tuberculosis is not one—(*a*) shall not be mixed with other milk; (*b*) shall not be sold or used for human food; (*c*) shall not be sold or used for food of swine or other animals, unless and until it has been boiled. The D.C. and M. Order of 1899 extends the above, so that *for the purposes of paragraphs* (*a*) *and* (*b*) *thereof* "disease" shall include tubercular disease of the cow's udder. By the exclusion of paragraph (*c*) from the operations of the order it is no offence to feed milch cows, or animals used for human food, upon unboiled tuberculous milk. Is it not time the Local Government Board amended this order?

I am, Sirs, yours faithfully,

R. BRUCE FERGUSON, M.D. Cantab., D.P.H., &c.

Feb. 11th, 1907.

THE SURGEON'S POWER OF LIFE AND DEATH.

To the Editor of THE LANCET.

SIRS,—In what way I am responsible if an article, entitled as above, in the *Independent Review*, which is a London monthly, did stir into enthusiasm the *gobe-mouches* of the local press in the district in which I reside, as asserted by the Editor of THE LANCET, is quite incomprehensible to me. However, to let that pass: in addition to the enthusiasm of the *gobe-mouches* in my district, the article has also evoked widespread interest throughout the country; it has been the subject of a leader in the *British Medical Journal*, in one of the chief London, and also in one of the leading provincial daily papers. What the Editor of THE LANCET elegantly calls an extraordinary farrago is a precise and accurate statement of what is daily happening under the present condition of affairs. It is undeniably true that, as soon as a man has obtained any medical qualification, he is at once given the power of deciding whether a person consulting him shall be submitted to an operation which may cost him his life; it is quite true that this terrible power of life and death is placed in the hands of an inexperienced youth practically without any safeguard; it is also quite true that when an operation has been performed, if the patient die and a medical certificate is given by the operator there is an end of the matter, no inquiry is instituted, nothing whatever is done by the State. Stigmatising these facts as an extraordinary farrago is a cheap but most ineffective way of getting out of replying to them.

[1] Cambridge Philosophical Society, Jan. 24th, 1907.

Since reading the leader in THE LANCET quoted I have looked into the subject more thoroughly and find that the State, when tested, should absolutely guard the safety of the people, though its actual powers, through lack of use and ineffectual application, have fallen into abeyance. Section 3 (1) of the Coroners Act, 1887, provides that the coroner shall hold an inquest on every person who dies ..... a violent or an unnatural death. I find, too, that in the comments to the above section in the standard work on coroners law (see "Jervis on Coroners," fifth edition, p. 6) it is stated that—

> In all cases of sudden death or death under any circumstances of suspicion where the duty of informing the coroner is not by statute imposed upon any particular person, it is the duty of those who are about the deceased to give immediate notice to the coroner or his officer or to the nearest officer of police.

And it is further stated that—

> It is an indictable offence to bury a man who dies a violent death before the coroner's jury have sat, or to otherwise dispose of a body in order to prevent an inquest being held.

On consulting Webster, I find definition 3 of the meaning of the word violent is "produced or effected by force, not spontaneous, unnatural, abnormal." Also it is worthy of note that—

> Consent, or in the common phrase—leave and license—will justify many acts which would otherwise be assaults. .....; or even if coupled with reasonable cause, wounding and other acts of a dangerous kind, as in the practice of surgery. But consent will not make acts lawful which are a breach of the peace or otherwise criminal in themselves or *unwarrantably dangerous*.—Pollock on Law of Torts, sixth edition p. 213.

Here we are now on solid ground. In the recent discussion at the Royal Medical and Chirurgical Society, reported in THE LANCET of Dec. 8th last, on the operative treatment of non-malignant ulcer of the stomach, Mr. Herbert J. Paterson (p. 1591) pointed out that the mortality from gastric hæmorrhage—i.e., in ulcer of the stomach—was probably not greater than 5 per cent., while the mortality from operation *during* hæmorrhage was between 66 and 70 per cent. Now in the cases of these unfortunate patients who were operated on during hæmorrhage, and whose risk of death was increased 13 fold, in how many of these fatal cases, clearly due to violence and *unwarrantably dangerous*, was an inquiry instituted or a coroner's inquest held in accordance with the plain and explicit statements of the law and comments as quoted? which says that "it is an indictable offence to bury a man who dies a violent death before the coroner's jury have sat."

Will any reasonable person, will even the Editor of THE LANCET, dispute that death after operation for gastric ulcer during hæmorrhage, where the risk of death is multiplied 13-fold according to Mr. Paterson, is a violent death and unwarrantably dangerous? If that be so, why was no inquest held and no investigation in these fatal cases made? Apparently, as my contention was, the magical influence of the letters M.D., M.B., F.R.C.S., &c., has been sufficient to override the actual law of the land. Stronger evidence still is furnished by Dr. W. Hale White in opening the same discussion at the Royal Medical and Chirurgical Society. He says[1]:—

> Further, when the stomach is opened during life while bleeding is going on the blood is often seen to be oozing from many points, so that it is surgically very difficult to stop the hæmorrhage, and even if this is done the patients often later get further attacks of hæmorrhage. For all these reasons the patient should not be subjected to operation if she is thought to be suffering from gastrostaxis; indeed, several patients have died after operation, and I have collected 24 cases operated upon with eight deaths, or a mortality of 27·5 per cent.; therefore, *as the disease is rarely fatal among those not operated upon* we must conclude that several of these eight cases would not have died if they had not been subjected to operation.

Now bear in mind these are not statements made by me to inflame "the enthusiasm of the *gobe-mouches*" of the local press in my own vicinity, but sober statements made by a high-class and reputable physician at an open meeting of one of the most cultured medical societies in the world, not disputed nor denied by any of the representative physicians or surgeons who were present and therefore presumably incontrovertible and accurate. Yet, examined by the light of the Act of Parliament and comments quoted, Dr. Hale White's position seems to me to be one of some responsibility in view of the comment that "it is an indictable offence to bury a man who dies a violent death before the coroner's jury have sat," and also "that it is the duty of those who are about the deceased to give immediate notice to the coroner or his officer." Perhaps I am labouring under an error, as according to the Editor of THE LANCET I write extraordinary farragos, possibly there were inquiries made and inquests held on these "several cases out of eight which would not have died if they had not been subjected to operation." The mere fact that a surgeon can point to a certain number of successful cases does not in any wise exonerate him from compliance with the law in any fatal case that may occur in his practice; the law is plain, clear, and explicit on that point.

The writer of the article in THE LANCET quite fails to grasp my position; the operation for ovariotomy falls well within the scope of the first class of my division of operations, that is, those that are legitimate and defensible; to quote my own words

> Any operation may be described as legitimate and defensible which is undertaken for the benefit of the individual without unduly risking his life—i.e., "not unwarrantably dangerous"; so that at the conclusion of the operation the patient is placed in a better position than he was prior to the operation having been performed.

The operation for ovariotomy exactly fulfils these conditions in every respect. The writer of the article surely would not wish us to suppose, as one might infer from his article, that because on some former occasion the operation of ovariotomy, at its inception, met with opposition from the medical faculty of that period, that therefore any new operation devised by some man "of original mind" must be received with open arms by the whole profession, even when the newly devised operation offends against the canons of common sense and daily experience.

For over 40 years now I have been engaged in the study and practice of medicine, during which period there have arisen many new forms of treatment, some of which have been retained but many of which have become quite obsolete, though at one time practised and recommended with vigor and persistence—e.g., a mode of treatment of locomotor ataxia which had a great vogue, and which partook of a surgical nature was that by suspension; this has now been practically abandoned, and Osler says:—

> "It was unreasonable from the outset, either on therapeutic or scientific grounds, to hope that by such a measure permanent changes could be induced in the pathological condition," and that the benefits said to be observed from its application "were due in great part to suggestion and to psychical effects" ("Practice of Medicine," p. 847).

Yet I well remember when a book was written on the subject by a high authority and various intricate instruments were invented for the purpose of suspending the poor unfortunate dupes who submitted to the treatment. Since Lawson Tait wrote his first paper on the induction of an artificial menopause, by the removal of the ovaries as a cure for myoma of the uterus, which, although at its inception lauded to the skies and proved by statistics to be a most successful operation, is now discarded and discredited, an extraordinary impetus has been given to abdominal surgery, a veritable epidemic with varying degrees of intensity has existed ever since. In the columns of THE LANCET of about 20 years ago there was scarcely a week passed but we were inundated with descriptions of oöphoritis, salpingitis, pyosalpinx, with the correlative operations of oöphorectomy, salpingotomy, and salpingo-oöphorectomy. These operations may occasionally now be resorted to but they are certainly nothing like so frequent or so much to the fore as they were some 15 years ago. What else has happened? Since June 24th, 1902, when Sir Frederick Treves operated upon the King, there has been an extraordinary increase in the literature on the subject of appendicitis and the number of operations has increased to an alarming extent. An M.D. of 30 years' standing writing in the *Daily News* of August 23rd, 1906, says:—

A Doctor on Appendicitis.

SIR,—All medical men do not agree with the medical officer of health for Stepney when he says that the mortality from appendicitis has been or will be lessened by operation. It is quite true, as he has pointed out, that since the disease became known by that name the mortality has steadily increased. What reason can be assigned? It cannot be that in recent years the appendix has degenerated so rapidly as to account for this increased mortality. Medical men who have been more than a dozen years in practice can well remember that before the term appendicitis came into general use they had patients suffering from what was set down as inflammation of the bowels, typhlitis, or perityphlitis, and the mortality was not great. Since the word appendicitis became familiar to the general public and the surgeon began to operate it has been greatly dreaded, and the first step towards recovery is when a medical man allays the patient's anxiety and assures him that after all an operation may not be required.

Personally, I can only say that in the dozen years or more since the disease was clearly recognised I have in a fairly large practice not lost

[1] THE LANCET, Nov. 24th, 1906, p. 1437.

a single case and only one was operated on. Operation was in this case resorted to at the patient's request, not because of danger to life, but because of recurring attacks interfering with his business and I do not believe there would have been any recurrence had the first attack been properly treated. Doubtless in very rare instances operation is advisable, but this is wholly different from the wholesale onslaught on the appendix and that at a risk which the reported deaths from operation too plainly show. I am not alone in holding this opinion. It is that of other medical men of large experience with whom I have discussed the subject. I do not give my name, as, with the present craze for operation, I should be ostracised by many members of my own profession and even the general public and regarded as a popularity-hunter, but sign myself as I am, M.D. of 30 years' standing.

With that letter I agree; it is interesting to note the last paragraph, as indicating the attitude adopted by the operating surgeon when anyone either questions or attempts to dispute their right to perform these frequently wholly unnecessary operations. As regards my own experience, I have only seen two cases of what I assume to have been genuine appendicitis in a fairly extensive practice, both private and hospital, in over 30 years, one of which was operated on and died, the other burst into the rectum and made an uninterrupted recovery; the patient is alive and well now after an interval of about four years. I may incidentally state that I was honorary medical officer on the staff of the Preston and County of Lancaster Royal Infirmary for 13 years and never had the pleasure of seeing a single case during the whole of that time, nor do I think that one did occur in the whole of the practice of the infirmary; at any rate, I never heard of one. Of course, it is quite open and easy to say the staff were a group of ignoramuses who did not know their work and overlooked palpable cases. This I deny. If the cases had occurred they would in most instances have been detected, and on reflection I do not recollect any suspicious cases that might have been overlooked. While on the subject of appendicitis I should like to quote the following case.[2] Mr. J. Bland-Sutton states:—

> Wendel operated on a woman, 35 years of age, on account of a painful swelling in the right iliac region expecting to find an appendix abscess, but he found a suppurating gall-bladder containing calculi and pus; it had suppurated.

Here we have a case operated upon for appendicitis by an eminent man in which apparently the appendix is quite unaffected, but a suppurating gall-bladder with calculi in it is found; surely the symptoms of appendicitis and suppuration of the gall-bladder are not alike; one would expect that an authority of the eminence of Wendel would not make such a blunder as that.

This leads me up to another point, that of mistaken diagnosis. In the *Daily News* of August, 1906, the following paragraph occurred:—

> The Poplar sanitary department report that during the past year no fewer than 57 patients belonging to the borough, or a percentage on the total admissions of 4·7 were, after being admitted to the fever hospitals, found not to be suffering from the diseases mentioned on the medical certificates upon which they were removed to the institutions. During the past five years it is estimated 10 000 patients have been so removed and were detained for an average period of three weeks at a cost of £60,000.

Also in the *Times* of Nov. 26th, 1906, p. 3, Dr. Kingsbury, quoting from the report of the Metropolitan Asylums Board, said that in 1905 there were 908 cases wrongfully certified as diphtheria out of 4148. In the face of such statements as these, where no less than 4·7 per cent. of such a transparently easily recognisable disease as fever was wrongly diagnosed, a disease the manifestations of which are visible and appreciable to any person, and in the case of diphtheria, where over 21 per cent. of the cases were diagnosed wrongfully, can it be wondered at that sober and responsible physicians of long experience are astounded and dismayed at the enormous increase in abdominal operations, many of them performed for obscure conditions, which are very often attended by fatal results, and in a considerable number of cases, as was only to be expected, at the time of operation the diagnosis is shown to be wrong? If over 20 per cent. of cases of a visible disease like diphtheria are wrongly diagnosed, *a fortiori* what must be the percentage of wrongful diagnoses in obscure abdominal complaints? Yet, when one is compelled to call the attention of the public to the manifest dangers of such operations and to ask for reasonable precautions to be taken to safeguard the public, one runs the risk of being sneered at by anonymous writers in leading medical journals and contemptuously alluded to as writers of farrago. As it is not my present object to write an article on appendicitis, I shall content myself with stating that, contrary to the view expressed by the writer in THE LANCET, there is great doubt "that the operation for appendicitis has greatly diminished the general mortality arising from the condition"—or the supposed condition—"or the duration of illness in cases which might have recovered under medical treatment alone." If performed in only suitable cases, and no others, many lives now sacrificed would be saved. It is almost pitiful to have to reply to such a statement as the following, when made in the columns of a responsible journal. You state, "an inexperienced youth does not attend a vast number of cases of any sort." My statement was: "This terrible power of life and death is thus placed in the hands of an inexperienced youth practically without any safeguard whatever." I do not say, nor can it be inferred from my remarks, that each inexperienced youth immediately on commencing practice attends a vast number of cases of any sort; the aggregate of the number of cases throughout the country attended by inexperienced practitioners must amount to a vast number and in each individual case that inexperienced practitioner has the first power of deciding whether the patient shall be submitted to an operation or not, the ultimate effect of which may cost the patient his life or leave him seriously maimed or incapacitated for life. Neither the writer of the article I am replying to, nor anybody else, can deny the fact, which can be verified any day. I have actually seen a newly qualified practitioner operate for an ovariotomy for the first time, when if it had not been for the presence of older and more experienced practitioners he could not have completed the operation successfully; the patient made an uninterrupted recovery, but my feelings at the time of the operation were well described by the late Dr. Owen Rees, senior physician to Guy's Hospital, who after seeing a similar operation, which also recovered, said he had serious thoughts of inviting his friends to come the following morning and take their breakfast in his peritoneum.

I do not permit the writer of the article to state for me what operations Dr. Rigby would denounce as unjustifiable. In the case alluded to, where Mr. Osler operated on the hip-joint, the operation easily and naturally falls into my No. 1 class of "justifiable and legitimate operations," but such cannot be said of the latest craze—that of operations for remedying ulceration of the stomach, except perhaps in case of acute perforation, where something may be said in favour of operation, though in the only case in which I have seen that attempted the patient died in two hours after the operation. I must confess yet to be sceptical with regard to the benefit to be derived from gastro-enterostomy, gastro-duodenectomy, or gastro-jejunostomy in such conditions as chronic ulcer or extremely dilated stomach with thickening and partial stenosis of the pyloric orifice. Theoretically, I fail to see how a patient suffering from such conditions as these can be much benefited by an operation which makes a small communication between the diseased stomach and one or other portions of the small intestine. I cannot see how healthy gastric digestion is to be accomplished, and it has not yet been attempted to be proved that no injurious effects will be produced on the human organism by leaving what is practically a useless diverticulum between the points of artificial inosculation between the stomach and intestine produced by the operation. Another point for consideration is, no later than last Friday (Jan. 25th, 1907) I saw an operating surgeon remove the vermiform appendix from a boy about 14 years of age. Prior to the operation the boy was running about; it was entirely on the recommendation of the surgeon that the boy was submitted to the operation as a preventive measure to avoid future mischief. All that was wrong with the appendix was that it was adherent and its walls were thickened; there was no interference whatever with the function of the bowel. Now if it be necessary to remove this apparently innocuous piece of tissue, what can be said in favour of an operation such as gastroenterostomy, in which a considerable portion of the alimentary tract, already diseased, is partially cut off and isolated, and then left more or less as a useless and functionless portion of the human economy? What is going to occur? What will in future happen to this isolated loop of bowel? Will it be a source of comfort or satisfaction to the patient, or will it cause him dire distress and discomfort? What is to prevent this open loop from forming a reservoir for undigested food, foreign bodies, and fermenting secretions? If the vermiform appendix

[2] THE LANCET, Jan. 5th, 1907, p. 2.

is such a fatal trap for cherry-stones and other foreign bodies, how much more is an open loop, of the capacity indicated, likely to catch and hold all sorts and conditions of harmful and hurtful things? And will it necessitate some future operation analogous to appendicectomy for the relief of some new class of symptoms as yet unrealised and unknown? Again, what is to become of the biliary and pancreatic secretions? I confess I cannot reply to these questions, I must leave it to those surgeons to answer who are embarking on these operations with such a light heart; but these certainly are proper questions to be put and urgently require some explanation and elucidation. Mere figures can prove anything; the effects of a serious operation on the imagination of a nervous patient are so powerful and long-continued that a considerable time must be allowed to elapse before we can admit that these apparently unscientific and illogical operations have justified their claim as serious additions to our list of justifiable and legitimate operations, and there has not yet sufficient time elapsed to show whether these patients are materially improved or not or for any length of time. It is manifestly absurd, for instance, for Dr. W. Russell[3] to say "that in some quarters it seems to be thought that the time is not far distant when the art of the physician will become obsolete and be replaced by the craft of the surgeon," and then to try to prove that position by describing three cases:—Case 1, pyloric narrowing, gastric dilation, and ptosis; operated on August 29th (presumably 1906). Case 2, duodenal ulcer, admitted to the Edinburgh Royal Infirmary on Sept. 21st, 1906. Case 3, malignant disease at the pyloric end of the stomach, a woman admitted to the Edinburgh Royal Infirmary on August 20th, 1906. These three cases, Dr. Russell tells us with all due gravity, "made uninterrupted and rapid recoveries, and were able to return to their homes in the course of three to four weeks." This is inimitable in its way, yet the Editors of THE LANCET reproduce it for the edification of their readers without comment and therefore presumably with their approbation. As a humble student, one thirsting for information, I would like to ask Dr. Russell what he thinks will be the state of Case 3 at the end of, say, 12 months or so from the operation? whether the mere removal of the pylorus and the formation of an orifice between the stomach and some conjectural portion of the intestine is likely to benefit permanently the patient and make a sound woman of her, one capable of carrying on the functions of life comfortably and satisfactorily for any reasonable length of time? and what is to induce the lymphatic glands to refrain from reproducing the infectious material we may reasonably assume had been absorbed from the malignant disease? These questions which are evidently brushed aside as of no practical moment to Dr. Russell are of vital importance and practically unanswerable.

The writer of the article winds up by saying:—

> The alarm sounded by Dr. Rigby appears to us to be a false one; and we think his paper calculated to excite a prejudice against the medical profession and against operating surgeons more especially, which the facts, far from justifying, are calculated entirely to remove.

In reply to that I will conclude this already too voluminous communication by a quotation from THE LANCET itself, which I could not have credited except that it is there for any of your readers to see for themselves. In a leaderette of THE LANCET, dated Nov. 17th, 1906, p. 1380, it states:—

> Mr. —— resorted to a tracheotomy for laryngeal obstruction due to cancer. The operation was so urgent that he had to perform it with a penknife. The heart stopped beating and with great promptitude he opened the abdomen with the penknife, inserted two fingers, and performed massage of the flaccid heart; after four minutes the heart began to beat, artificial respiration was performed, and natural respiration resumed. The patient never regained consciousness but lived for about two hours.

The writer of the article in THE LANCET who visits my poor paper on the Surgeon's Power of Life and Death with such censure made no comment on the above "urgent" (*sic*) double operation on a moribund cancer patient. It is difficult to place the above two operations in any class, they certainly had no prospect of saving life as the patient was suffering from an incurable disease; they were not done at the desire of the patient, nor were they done for the relief of pain, as "the patient never regained consciousness"; the only object achieved, so far as my feeble powers of observation are worth anything, was that the mere vegetative existence of the poor dying patient was prolonged for two hours. *Cui bono?*

In conclusion let me offer a word or two of advice to the writer of the article quoted. When criticising an article appearing in a responsible journal it is wise to do so in a spirit of fair play and not to misrepresent one's opponent, who is most likely only animated by a desire to ascertain the truth. It is worth while, in a just and equitable spirit, to not only defend one's own position but critically to examine and if possible refute the views of one's opponent in civil terms. This I contend the writer of the article has quite failed to attempt to do and has introduced an element of bitterness in a controversy which ought to have been conducted without any heat or animosity but with a steadfast desire to ascertain what is best for the community at large.

I am, Sirs, yours faithfully,

Feb. 4th, 1907. JAMES A. RIGBY.

[3] THE LANCET, Jan. 12th, 1907, p. 73.

THE BENEVOLENT AGENCIES OF THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—In your leading article on medical benevolent societies in the issue of Jan. 12th you call upon practitioners generally to support these societies and also suggest to the medical men residing in those counties where no such institution exists to try and get one started.

Now, Sirs, as far as I am aware no such thing exists in this county (Lancs), and I, for one, would very much like to see one instituted—for instance, on the same lines as the Society for the Relief of Widows and Orphans of Medical Men of London. Also, no doubt a large number of the poorer practitioners here, as elsewhere, would welcome such an institution as relieving them of some of what we may term the "primitive anxieties" of life; and at the same time the wealthier members of the profession would be willing to support it, though they would have little chance of ever needing its benefits.

You say such a society was started in Sussex two years ago, but I am unable to find the address of its secretary (as the local medical benevolent societies are not put in the Medical Directory) or I might try and get some particulars of its foundation from him. Perhaps some of your readers who possess the necessary knowledge will make suggestions as to the best method of procedure in the attempt to get such a society started here in Lancashire, especially if they be local men.—I am, Sirs, yours faithfully,

N. I. SPRIGGS, M.D., B.S. Lond., F.R.C.S. Eng.

Southport, Feb. 8th, 1907.

STRYCHNINE: WHAT IS A LETHAL, AND WHAT A MEDICINAL, DOSE?

To the Editors of THE LANCET.

SIRS,—Several notes have appeared in your journal and elsewhere from time to time, and some of the doses of strychnia said to have been taken with impunity have been so enormous, in one case as much as half a drachm, that the questions arise: 1. Is the statement true? 2. What is the explanation? 3. Does the dose need revision and increase? 4. Is anyone capable of eating strychnia in the same way that some of the Styrians are said to be able to eat arsenic? 5. Is idiosyncrasy common? 6. Does the habitual consumption of strychnia allow of large doses—say, of one grain or more—to be taken with impunity, and, if so, how much? 7. What would be the position of a medical man who having administered, say, one grain of strychnia, and death ensuing, he was charged with murder?

My own experience leads me to believe that the quality of the alkaloid may in many cases be responsible for the results, especially when in the form of powder. I have used strychnia for many years and I find that a dose of from three to seven minims of the liquor strychniæ of the B.P. strength is very well borne by adults, but the latter dose often produces symptoms similar to ptyalism, with contraction of the platysma muscles and twitching and drawing down of the oral angles. I have usually procured the strychnia in crystals and I have made my own solution. I have some strychnia by me at the present time, but I should hesitate to administer so large a dose as, say, one grain to anyone, inured or otherwise, unless he was a profound believer in Christian Science, when possibly (?) the circumstances might

be entirely altered. Strychnia is said by some of our leading neurologists to be decomposed in the stomach. No doubt this is the case, but yet it is not rendered quite an inert substance even when taken by the mouth.

I have injected the nitrate of strychnia subcutaneously in doses of $\frac{1}{120}$th grain and I can testify that its bitter taste can be distinctly recognised in the mouth and the appetite is notably increased. It is this bitter and tonic effect that is probably one of its most valuable qualities. One grain of strychnia dissolved in 70,000 grains of water, equal to one gallon, is said to be distinctly tasted by its bitterness. In these degenerate days, when drugs are said to be entirely useless by some, I for one should be sorry to see strychnia classed as one of the effete substances. I have seen poisoning by strychnia in pregnancy with violent convulsions, but without any evidence of uterine contraction. The late Dr. Ramskill used to say that he always gave very large doses of strychnia, but what this quantity was, I have never heard him say. The dose of strychnia in some of the books is from $\frac{1}{30}$th to $\frac{1}{15}$th grain, Martindale and Westcott, ninth edition, 1898; from $\frac{1}{30}$th grain to 1 grain, Squire's "Companion to the British Pharmacopœia," 1874; $\frac{1}{12}$th grain has poisoned a child, Taylor's "Medical Jurisprudence," 1874; $\frac{1}{8}$ grain has poisoned an adult, *ibid.*

I am, Sirs, yours faithfully,

ALBERT S. MORTON, M.D. Durh.

Putney, S.W., Feb. 6th, 1907.

A CASE OF DORSAL DISPLACEMENT OF THE ARM IN VERTEX PRESENTATION.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 19th, p. 165, an interesting case is reported by Dr. Arthur G. Wells under this heading. We are told that from the abdominal examination the case was diagnosed as one of second position of the child, but we are not told if the internal examination confirmed this. I venture to suggest that the case might have been one of third position of the child and then the displacement of the arm is easily explained. With the sudden rupture of membranes the left hand and arm came down over the face as is not an uncommon occurrence in vertex presentation, especially with escape of excess of liquor amnii. When the head was well in the pelvis the final long rotation occurred, but the arm did not rotate with the head. The face, the side of the head, and the occiput rotated in turn under the arm, and finally the left hand and arm were to the back of the occiput and to the left side of the child's neck, distending the right side of the perineum of the mother, as was seen in the case reported.

I should be interested to hear if the vaginal examination confirmed the abdominal, or if the vertex were too high up for a definite diagnosis. Also, if it were the left arm that was displaced. Much the same difficulty might occur with extracting a head with arms extended if the body were rotated in the wrong direction. In this case the backward displaced arm could not be liberated until the head had been rotated back again.—I am, Sirs, yours faithfully,

F. E. TURLE EVANS, L.R.C.P., L.R.C.S. Edin.

Willesden Junction, N.W., Feb. 6th, 1907.

THE CURRANT AS A FOOD.

To the Editors of THE LANCET.

SIRS,—It seems inexplainable that the medical profession generally has expressed no opinion upon the present craze for the use of currants in bread and other forms of food. At some of our principal stores currant loaves and other forms of eatables with currants as ingredients are exposed for sale and labelled "as recommended by (here follows the name of a well-known practitioner)." The ethics of this legend I do not now question, but I think that the wholesomeness of currants as they exist in currant loaves, &c., is a matter of opinion and calls for discussion. If the admixture of currants with bread is really a useful and nourishing form of food, good and well, let it continue; but I have no hesitation in stating that currants are neither a useful nor a wholesome addition to our bread and therefore to be condemned. Anyone having experience of children and their dietetic ailments must be aware of the effect of currants upon children. The currant is not digested by children; it is usually passed whole and is the commonest cause of stomach-ache and diarrhœa after "children's parties."

How, then, has the currant attained so high hygienic fame recently? The experience of every household where there are children is against it. It is, in my opinion, wholly unworthy of such recognition as a food and is fraught with danger to the gastro-intestinal tract of children especially. With adults it may be different; the very indigestibility of the currant may serve as an exciting factor to the intestine, especially the large bowel, and promote, it may be, much-needed peristalsis and laxity thereby. This seems its only virtue and if this is its chief or only function within the human economy it is well the fact should be stated. There is possibly a difference in the digestibility of currants according as they are used in bread or in a form such as obtains in, say, dumplings. In bread, by baking, the skin of the currant is dried to an extent that renders it wholly impervious to any digestive fluid; it is possible, however, that in currant dumplings, Shelford puddings, &c., the long boiling to which these are submitted may serve to soften the skin or by cracking it allow the contents to be extruded. By boiling currants may be rendered less indigestible but any article of diet with currants prepared by baking, as in bread and buns, or by frying, as in countess pudding, tartlets, cakes, and fritters, the currant becomes indigestible and serves not as a food but as a gastro-intestinal irritant. I write these notes in the hope that the opinions and experiences of others may be elicited.

I am, Sirs, yours faithfully,

JAMES CANTLIE, M.B. Aberd., F.R.C.S. Eng.

Harley-street, W., Feb. 12th, 1907.

AN IMPORTANT CORRECTION.

To the Editors of THE LANCET.

SIRS,—The Students' Union of St. Bartholomew's Hospital regrets very much that the name and address of E. D. Fitzgerald, M.R.C.S., of Castle Hill-avenue, Folkestone, was included in the "Obituary List of Bartholomew's Men" and published in the Students' Union Year-Book for 1906. The Students' Union wishes through your columns to inform Mr. Fitzgerald's friends and your readers generally that Mr. Fitzgerald is alive and well and the Union hopes to be excused for any pain which has been caused by the mistake made.

I am, Sirs, yours faithfully,

S. TREVOR DAVIES,

Feb. 7th, 1907. Honorary Secretary, Students' Union.

A CASE OF INOPERABLE CANCER TREATED WITH TRYPSIN.

To the Editors of THE LANCET.

SIRS,—As bearing upon the case recorded by Dr. Bertram Abrahams under the above heading in THE LANCET of Feb. 9th I should be glad to be allowed to refer your readers to the notes of the following case.

On May 19th, 1906, Messrs. ——, agents in this country wrote to me for advice and particulars of trypsin treatment on behalf of the wife of a constituent of theirs in South America. Briefly, from the notes of the case inclosed to me it appeared that in May–September, 1904, the patient, aged 30 years, suffered from severe pain in the right breast, stomach indisposition, ill-health, and "neurasthenia," for which she was treated. In the latter month a small tumour of the size of a small nut was for the first time detected in the right breast which, in spite of daily injections of cacodylate of soda for some weeks, continued to grow. In December the breast and axillary glands were removed, with apparent recovery of health. In March–April, 1905, there was a return of pain and in July obvious recurrence of growth. At this time the patient placed herself under the care of a Chinese "herb doctor." The pains and swelling disappeared and she gained 18 pounds in weight. In October the patient had the misfortune to lose her father and to have a daughter ill with typhoid fever. The consequent anxiety, bad nights, and constant attendance on her daughter prevented her taking care of herself and resulted in relapse. In February, 1906, the pain increased in severity and sleep was impossible; small sores and excrescences appeared at the site of the operation, accompanied by great fœtor. In April the sores had increased and pleuritic effusion was present. Morphia was resorted to in order to mitigate the pain, which otherwise was

unbearable, but no sleep was secured and her weakness was becoming every day greater.

On May 21st I replied that it was "impossible for me to be of any use," and noting the date of the report—April 16th—"I much fear the patient is beyond relief, as pleurisy is a most unfavourable sign." Two days after this opinion a cable message was received, advising the death of the patient.

I am, Sirs, yours faithfully,

JOHN A. SHAW-MACKENZIE, M.D. Lond.

London, Feb. 11th, 1907.

INTRAMEATAL OPERATIONS.

To the Editors of THE LANCET.

SIRS,—In answer to Mr. Macleod Yearsley's letter, which I overlooked till to-day, may I say that he does not point out what are the inaccuracies in my letter. But he makes certain statements which I take objection to. I have never used the word "wickedness" in connexion with any operation and certainly not concerning one that I have had occasionally to perform. Nor have I ever preached "universal otectomy." In my recent letter to THE LANCET I said: "Many cases do not require operation at all." Mr. Yearsley's reference to "universal irrigation," though the term is his own, is not so objectionable, as I still think that irrigation is the essential treatment in all cases of infected ears. Again, otectomy, to Greek scholars, would hardly signify "removal of the ear." My dictionary gives ἐκτομή from ἐκτέμνω=to cut out *from*. A cutting out of diseased tissues from the middle ear is an excellent definition of the operation I perform, and that, with provision of a free way for irrigation, is all that is generally required. I have seldom found it necessary to remove the outer attic wall. The removal of an ossicle is also often unnecessary, and why I should be forced to accept a term (ossiculectomy) which is actually misleading I fail to understand. The term itself is hardly applicable to the removal of an ossicle. It is almost amusing to hear that several otologists have been in favour of intrameatal operations all along. I have been told that I was considered a crank for advocating such methods. I have read a great deal that has been written against intrameatal interference, but until I saw Mr. Yearsley's letter I had seen nothing of recent years that supported my views. Several of my patients have been advised against otectomy and are in consequence still suffering. Though I cannot agree with all Mr. C. J. Heath says, he will perhaps permit me to quote from his paper published in THE LANCET of August 11th, 1906: "The paramount position which the radical operations hold in the estimation of otologists is a tacit acquiescence in the opinion that chronic suppuration of the middle ear is generally considered to be incurable by any other means."

You, Sirs, can bear witness that I have not acquiesced in any such opinion, but I am afraid, in spite of Mr. Yearsley, that there has been much tacit acquiescence. I have not received any support at all from otologists, but if these cases can generally be cured without resort to a radical operation, which Mr. Yearsley is evidently beginning to believe, and which I can assure him is the fact, he should surely appear as a friend and not as a rather discourteous opponent.

I am, Sirs, yours faithfully,

Coventry, Feb. 9th, 1907. F. FAULDER WHITE.

BURIAL BY THE STATE.

To the Editors of THE LANCET.

SIRS,—With all the talk about funeral reform and earth-to-earth burial, it is a wonder that the matter of burial by the State has not been made a subject of practical legislation. It is a matter of growing and urgent importance when we come to consider the increase in population and the consequent increase in death, as well as the useless and unnecessary expense attendant on what must naturally come to all of us.

It is clearly evident that burial is compulsory, and starting with the modern Parliamentary and logical conclusion that what is compulsory should be free, or managed by the State, there should be no difficulty in arriving at the idea of civil or Government burial. We are bound by law to be registered at birth, educated, married legally, be it State, Church, or Registrar, free or at a fixed nominal cost; why, then, should there not be a similar enactment in case of death? The State undertaking to see what is necessarily compulsory is carried out in the best and most sanitary manner. Government at present appoints medical officers of health to be of use whilst we are living, and coroners to inquire into the matter of sudden deaths, when at the most important time it leaves the relatives to carry out the burial in their own devious and insanitary manner. It would be most helpful and expedient for the State to appoint in every town a local burial official, who could on the death of anyone be duly notified by the doctor or relatives, and who would then proceed at once to take the matter of burial in hand by sending attendants to remove the body in an ambulance to a civic mortuary in or near the precincts of a cemetery, where it could lie until there were signs of dissolution and so prevent the horrors of what has occurred in many instances (many of which have been proved), viz., premature burial. On it becoming certain that death had taken place, the proper authorities would then proceed to the interment of the body in a wrapper or light covering, and so get a healthier and completely earth-to-earth burial. This would do away with the expense and present gruesomeness of encasing the body in a more or less ornamental coffin, which at present takes place in houses, many of which are far too small for the living, let alone the dead and in many cases infectiously deceased body (*vide* medical reports). Total dissolution would thus take place in a more natural and less dangerous manner than by the present system and the gases generated would be not only not dangerous to the inhabitants of the vicinity, but, as scientists prove, would resolve themselves into the air and form component parts of pure atmosphere.

This system would certainly be preferable to the horrors of cremation, which cannot be viewed with calmness by the spectator, to say nothing of the expense and the prevention of any subsequent examination that might be required in cases of poisoning, and it can only be small satisfaction to have the ashes of the family in different urns about the house. Abraham of old was right when he said: "Let me bury my dead out of my sight," and if death is, as we are told, only a passing to a better life an example should be shown by the better educated not to make what must be, and is, a sad and solemn event into an unnecessary display of grief and show in dress and ancient mummery that can do no good to the departed and is often harmful and irksome to the spectators. The officer thus appointed would then be responsible for a proper register and relatives would be at far less trouble in getting records of death in case of wills, &c., instead of having to search old and various registers, as is the case at present.

It only needs the statesman to come forward and formulate such a measure and lay the case before the public, so as to free them from false sentiment and prejudice, to achieve one of the greatest needed social and sanitary reforms of the twentieth century.

I am, Sirs, yours faithfully,

STEPHEN P. WILLS.

Langland Bay, near Swansea, Jan. 26th, 1907.

MILK IN SMALL GENERAL SHOPS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 26th Dr. G. Sowden, medical officer of health of the borough of East Ham, calls attention to a statement made in an article by me on Milk in Small General Shops, which appeared in THE LANCET of Jan. 19th, p. 193. The statement in question was to the effect that it had been asserted on excellent authority that about 70 per cent. of the total milk-supply of London is to be found in the small shops. I made a mistake. What I should have said was that more than 70 per cent. of the milk-selling premises of London are, according to excellent authority, situated in general shops. This means that the poorer classes obtain a very large proportion of their milk-supply from general provision shops.

From statistics given by Dr. Sowden it would seem that the proportion of dairies to provision shops which sell milk in East Ham is higher than in many parts of London, but Dr. Sowden speaks whereof he well knows and I am in no way seeking to controvert his interesting information. There are too many insanitary provision shops which sell milk, though I have unwittingly exaggerated the amount of milk sold in them. There is universal agreement among medical men that the insanitary conditions prevailing in provision shops are a distinct menace to the health of the consumers—of young children and infants in particular.

May I add a few words to a letter already full long?

Having recently come into Paddington Station by a mid-day train which happened to discharge its passengers at an end platform adjacent to the platforms on which the bulk of the milk transported into London by the Great Western Railway is deposited whilst awaiting removal, I seized the opportunity to learn something of the manner in which milk is handled on the large London railway stations. By far the greater part of the milk which is brought in by way of Paddington Station is placed on a platform to which the passenger is not allowed access, so that I looked upon the proceedings from some distance, but I could distinguish the fact that while the majority of the cans, about 100, were locked, there were at least 12 the covers of which were undone and half open, allowing any dust or dirt which might be floating about free entrance to the milk. It is not unlikely that the cans were left in this unclosed condition for inspection, but it would seem contrary to the laws of health that milk should be left uncovered for even a comparatively short period in a place like a London railway station. A very large quantity of milk is brought into Paddington Station by special trains or by ordinary trains and the greater part of it is for large milk companies. Precautionary measures are undoubtedly the rule with such companies and it seems to me that the opening of cans on the station platform can hardly be a recognised procedure. It is certainly a dangerous one.—I am, Sirs, yours faithfully,

THE WRITER OF THE ARTICLE ON MILK
Feb. 9th, 1907. IN SMALL GENERAL SHOPS.

THE COMPLETION OF THE HAJ: REVIVAL OF PLAGUE IN JEDDAH.

(BY THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

THE completion last week of the annual ceremonies at Arafat and Mina, near Mecca, in which the Moslem pilgrimage culminates, without the appearance among the pilgrims of any cases of plague or cholera is a matter for congratulation.

The present Haj, or Pilgrimage, has been more numerously attended than any of its predecessors for many years past. It is reckoned roughly that about 250,000 persons were probably present at the final fêtes. The increase in the number of pilgrims has been no less marked among those who come to the Hedjaz from the north, by the Suez Canal, than among those coming by the Straits of Bab-el-Mandeb. At the lazaret of Camaran, to which the majority of the latter group of pilgrims are sent to do quarantine, some 43 000 persons have passed through the lazaret; the largest figure in any previous year since this institution was opened in 1882 had been between 32,000 and 33,000. There are probably several causes for this general increase but the most important are the following. In the case of pilgrims coming by the Straits of Bab-el-Mandeb the increase has been mainly among Indian subjects, and this is undoubtedly due to the fact that this year the Government of India has removed the five days' quarantine before departure from Indian ports which had been in force for several years past. The other cause has been a large increase in the number of Russian pilgrims, many of whom have been prevented from performing their pilgrimage during the past year or two by the disorders in the Caucasus, the disturbances on the railways, and the other effects, direct and indirect, of the Russo-Japanese war.

There can be no doubt that in these circumstances the towns of Jeddah, Medina, and Mecca must have been overcrowded to an even greater extent than in other years. From personal observation during a stay in Jeddah a year ago I can vouch for the strain put upon the sanitary condition of that town during a season when the total of pilgrims was perhaps only two-thirds as great as in the present season. No non-Moslem European is allowed to go to Mecca or Medina, still less to Mina and Arafat, so that any description of the sanitary conditions of those places at the height of the pilgrim season can only be given at second hand. It is certain that in recent years a good deal more has been done to meet sanitary deficiencies in those places than was formerly the case, but there would appear to be still room for considerable improvement. This is not the place to describe the final ceremonies of the pilgrimage, but a brief outline of the movements of the pilgrims during the four days that these ceremonies occupy is necessary to the understanding of the brief notes that follow respecting the sanitary measures taken.

The fêtes may be said to begin on the eighth day of the Moslem month of Zil-hidjé, which this year fell on Jan. 23rd. That day the pilgrims leave Mecca, pass through Mina and Muzdalifeh, and arrive at Arafat which is about 14 miles from Mecca. There they spend the night. On the 9th Zil-hidjé the great annual sermon is preached at Arafat, in the presence of the vast crowd of pilgrims, at two hours before sunset. As soon as it is over the pilgrims start back towards Muzdalifeh, where they arrive in about one and a half hours if on camel or donkey back, and in about two and a half hours if riding in a "shugduf," or camel litter. They stop at Muzdalifeh only long enough to gather 49 stones, to be used on the following three days. They then hurry on to Mina, about two hours' ride in a "shugduf," where they stay the night. On the 10th—the first day of what is known as Kurban Bairam—they sacrifice sheep in the morning. Each pilgrim ought, if possible, to sacrifice one sheep; many of the richer pilgrims sacrifice several. A small portion of the flesh of the sheep is eaten but the bulk of it is buried. They then throw seven stones at the third of three pillars. Mina, it should be stated, is really a town of some size; two of the pillars are in one of the streets, the third is near the Mecca end of the town; it is supposed to mark the site where the Devil tempted Abraham not to slay Isaac. On the 11th Zil-hidjé the sole religious duty of the pilgrims is to throw, at any time during the day, more stones; this time at all the three pillars, seven stones at each. On the 12th, early in the morning, they again throw 21 stones at the three pillars. Shortly after sunrise, however, they must start again for Mecca. A few (mostly Japanese) pass the night of the 12th at Mina, but these are the exception. On the way from Mina to Mecca the pilgrims pass near two hills, called Safa and Marva, about a quarter of a mile from each other. They are expected to walk backwards and forwards between these hills in such a way as to make seven journeys in all (i.e., not seven journeys each way), and as to finish up at Marva. The last 30 yards or so near to Safa must be run, the rest is walked. On arriving at Mecca they are further expected to make the tour of the Kaaba seven times—a rite which they have already once performed before leaving for Arafat.

This very brief summary of the rites of the Haj gives but the merest outline of the whole series of ceremonies. It will be seen that the pilgrims sleep one night at Arafat and three at Mina. At Arafat the water-supply consists of several large basins or reservoirs, which are filled before the fêtes with water from the Aïn-Zubeideh spring, from which Mecca itself is also supplied with water. This spring is situated in a place called Harik-Naaman, about one and a half hours (say, five miles) to the east of Arafat. It is said that in the times of the good Harun-al-Rashid a terrible water famine occurred one year during the fêtes at Arafat, and Zubeideh, the wife of the Caliph, consequently caused pipes to be laid down to conduct the water from the spring to the scene of the fêtes. The piping from Arafat to Mecca was, it is said, continued by the mother of the Sultan Suleiman II. At Arafat the principal conduit divides into branches which pass to the reservoirs. There were once 24 of these; now there are only six, the rest having fallen into ruins. They are all uncovered; each year before the fêtes they are cleaned out and filled with the spring water; and the conduits are then closed again and not reopened until the following year. A military cordon is placed near the basins, but in spite of this it is stated almost every year that pilgrims have bathed and washed their dirty linen in them. At Mina there are cisterns to the houses, which should contain rain water; when, as in recent years, rain fails they are filled with Aïn-Zubeideh water.

In 1879 the repair of the whole system of water-supply was undertaken; a public subscription was made, and not only a large number of new drinking fountains were opened in Mecca, but piping was laid down to distribute the water to Mina. The work lasted for seven years, during which 13 drinking fountains were opened in Mina and a steam pump put up at Mefdjer, about a couple of miles to the south-east of that town, by which means the water was distributed to new reservoirs that were also constructed in Mina. Unfortunately, some of the conduits are said to be more or less open channels, in which the water runs the risk of being contaminated or soiled. But, in general, the Aïn Zubeideh water is declared to be a copious and pure supply and if distributed in properly closed pipes would, it appears, be a

perfectly safe one. Recently the supply has shown signs of diminishing and once more a public subscription for the thorough repair of the pipes has been inaugurated by the Sultan and has already produced a large sum of money, and with this it is hoped, not only to carry out the necessary works at or near Mecca, but also to deal with the far more urgent question of supplying a pure drinking water to Jeddah. On this latter question I shall have occasion to send you some details in another letter.

The problem of excreta removal is, it seems, solved in the following manner. In Mecca itself there is one drain or sewer, about a kilometre long, which conducts the drainage of the public drinking fountains and public latrines to a valley to the south-west of the town. This spot is said to be fairly distant from any habitation; the sewage falls into pits or reservoirs specially prepared to receive it, but the soil of the valley is said to have become marshy and offensive in consequence of this arrangement. The solids are, it is said, converted into bricks, presumably after mixture with other suitable materials. Only those houses situated on the line of this sewer drain into it. Other houses have cesspools (as at Jeddah). These are emptied at intervals and the contents buried in the earth. Abyssinians are said to be employed for this unpleasant work. At Mina there are over 400 public latrines and each year before the fêtes these are said to be put in order and whitewashed.

There is a small hospital at Mina, but it would seem from all accounts to be of a rather primitive character. The sacrifice of many thousands of sheep more or less simultaneously obviously gives rise to a set of conditions requiring rather special measures. The town of Mina is situated in a valley through the middle of which runs the main road to Mecca. In one portion of the valley, on both sides of the road in question, a series of trenches are dug before the pilgrims arrive; the other half of the valley is reserved for the camping-ground of the pilgrims. A military cordon prevents the pilgrims on the one hand and the sheep on the other from passing from one half of the valley to the other. When the sacrifices are completed and the pilgrims have removed such of the flesh as they intend to eat, a large number of sanitary guards and coolies, with carts, collect the bodies of the sheep, throw them into the trenches, cover them with quicklime, and bury them. Since the year 1903 the bodies have been skinned before burial and the skins sold; they probably represent a very considerable profit. With regard to conservancy, it is said to be quite impossible during the three days of the fêtes to keep the streets of Mina cleaned; this I can well believe to be the case from what I saw last year in Jeddah during the return of the pilgrims. In Mecca the town is divided into quarters, to each of which a sheikh is appointed, whose duty it is to provide a sufficient number of donkeys, donkeymen, and sweepers to keep the quarter clean. If the sheikhs do not do their duty in this respect they are said to be liable to severe punishment by the Grand Sherif. In return they receive from each household or shop a fixed sum monthly, this sum being fixed by the Grand Sherif.

Such, in briefest outline, are the actual physical and sanitary conditions under which the terminal ceremonies of the annual Moslem pilgrimage take place. It may be added that the information upon which the present notes are based has been derived from several different sources, but mostly from personal inquiries made of official and unofficial persons who have themselves made the pilgrimage and from the written reports of the sanitary authority at Mecca.

As stated at the beginning of this letter, no case of plague or cholera has up to the present occurred among the pilgrims this year. Unfortunately, however, quite recently there has been a revival of the infection of plague in Jeddah, where, it will be recalled, a small epidemic of that disease prevailed last summer. That epidemic apparently came to an end about the last week in July. No further cases were observed there until Jan. 8th. From that date to Feb. 3rd 23 cases and 22 deaths have been reported. Fortunately all these cases and deaths have occurred among the native inhabitants of the town of Jeddah and the pilgrims have entirely escaped the infection. At this moment, however, the pilgrims are flocking back to that port in enormous numbers and there is once more a risk of the disease appearing among them. The same risk was, however, present a few weeks ago, when they were flocking in the other direction, and there is still hope that they may escape the danger on this as on that occasion.

Constantinople, Feb. 5th.

THE NEW FRENCH LUNACY LAW.

(FROM OUR PARIS CORRESPONDENT.)

THE Chamber of Deputies has just passed a Bill which if it becomes an Act will bring about most important modifications in the existing Lunacy Laws. Up to now the laws concerning lunatics have been those which came into force on June 30th, 1838. For the time at which they were passed these laws were very remarkable and inspired the lunacy legislation existing in most other countries, but these countries have from time to time made various improvements while France has remained steadfast to the original law. Many attempts have all the same been made to modify the law, for instance in 1869, 1883, 1886, 1887, and 1893, but nothing definite has come of these attempts. In 1886 the Senate took the matter into its own hands and passed a Bill which was sent down to the Chamber of Deputies. This Chamber, however, ignored the Bill. The new Bill which the Lower House has just passed will in its turn have to go up to the Senate and it is to be hoped that it will meet with a better fate than its predecessor. The Bill is due to one of the Deputies, Dr. Dubief, who was formerly a medical man in charge of an asylum and who has all the question at his fingers' ends. The chief fault of the existing law is that it does not offer sufficient guarantees for individual liberty and that it opens the door to gross abuses. Under it a person may be placed in a lunatic asylum in two different ways, one of which, "*placement volontaire*," may be executed at the demand of any member of the family or even of a friend on the production of a certificate signed by a medical man. The second is entitled "*placement d'office*," and this can be carried out in the case of violent or dangerous lunatics by a police commissary, a mayor, or magistrate, also with the aid of a medical certificate. It is easy to see how this simplicity of formality permits persons to be placed hastily or arbitrarily in a lunatic asylum, even with very slight grounds existing for the adoption of such a course. It is true that the director of any lunatic asylum, whether public or private, has within 24 hours of a patient being admitted to the establishment to furnish a certificate which is transmitted to the prefect stating that the patient really is a lunatic. 15 days later another certificate has to be furnished, and once a month the asylum is supposed to be visited by a representative of the tribunal to hear any complaints which the inmates may have to put forward. These precautions seem quite sufficient in theory but in practice anyone can be put into an asylum as a lunatic if any member of his family wishes to get rid of him, for he has only to insure the complicity of a medical man or to deceive him into acting in good faith to obtain the official certificate. Once this is done all the legal machinery goes on automatically and the patient can be shut up in an asylum for many years without the power to go out, provided that any money which he may possess is placed under legal guardianship.[1] The certificate, which has to be given 24 hours after the entrance of the patient into the asylum, always, as a matter of fact, states that the new patient should be kept under observation, and the more violently he protests against his internment the more necessary it appears that he should be watched.

After having been shut up with real lunatics for some 15 days it almost invariably happens that the mental state of the newcomer is somewhat unbalanced and the new certificate of the director of the asylum almost always states that he must be still kept under observation. After that there is no more to be said and provided that the family pay the fees regularly it is almost impossible for the patient to obtain his liberation. The monthly visit of the official visitor who is supposed to see in the space of one hour many hundred lunatics, a visitor, moreover, who generally knows nothing of mental afflictions, offers an entirely illusory guarantee. By the new Bill the safety of the individual is much better guarded and it takes into consideration the different categories of lunatics of which the old law took no note—that is to say, criminal lunatics, epileptics, idiots, and alcoholics. The number of formalities which have to be gone through before the patient can be placed in an asylum are very much more serious than before. Some judicial authority is substituted for a simple police officer and arguments *pro* and *con* the internment of the patient can thus be heard. The

[1] Cf. the curator bonis of Scots law.

original initial certificate is replaced by a detailed medical report which has to be sent in to a magistrate and this magistrate has the power of demanding an inquiry before the certificate takes effect. The certificate to be sent in at the end of 24 hours by the director of the asylum is also altered into a detailed report and this has to be sent to a procurator of the Republic of the district where the asylum is situated and also that of the district whence the patient comes. 15 days later another certificate has to be sent in under the same conditions.

Finally, confinement in the asylum is not definitely decided upon until the president of the tribunal has agreed to it after having thoroughly studied all the different certificates which have been sent in. If anybody lodges the smallest objection the president of the tribunal cannot come to a decision except after consulting with his court and having heard expert opinion. If the patient has been sent to a private asylum the fact that he has been so sent has to be notified to the judicial authority, who has to decide the method and manner of his captivity, and for this the procurator of the Republic is responsible. Other clauses of the law deal with the case of idiots, epileptics, cretins, and drunkards. In the case of criminal lunatics the jury can inquire through the president of the tribunal whether the accused is to be considered irresponsible or not. If the answer is in the affirmative the criminal can be sent to a special lunatic asylum, which he is not allowed to leave except by order of the court and the certificate of cure by an expert medical man. Even when he is set free his freedom is only conditional. From the point of view of treatment the new law strives to bring about treatment of the lunatic in the most favourable conditions and is in favour of the creation of asylums with the "policy of the open door" and of "family colonies," such as exist at present in Belgium and at Dun-sur-Auron. Finally, the number of medical attendants to each asylum is to be much augmented. At the present moment it is quite possible for one medical man to have the responsibility and the treatment of between 500 and 800 lunatics. The director of the asylum must always be a medical man. Finally, no private asylum or any "Maison de Santé" is henceforward to be opened without special authorisation after a preliminary inquiry. The new Bill, of course, has to be passed by the Senate before it becomes a definite law.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Action of the Police in a case of Attempted Suicide.

THE city magistrates were recently occupied in considering a case in which the authority of the police and the authority of the medical man in charge of a patient came into collision. Mr. S. Bagley of West Gorton was called to a man who had cut his throat. The police soon arrived on the scene and wished to take the man to the Ancoats Hospital, but this was objected to by Mr. Bagley as the patient was weak from loss of blood. The police, however, insisted on removing the man and Mr. Bagley was arrested for obstructing the police and for a technical assault, together with the two sons of the patient. It was argued that by the law of the land the police could not arrest a person for a "misdemeanour," under which head the reputed offence came, without a warrant, which in this case had not been obtained. But, as the defence stated, in London and Manchester special Acts had been obtained governing local conditions and giving power to the police of Manchester "to override all the rest of the law of England. Manchester, in fact, had the power to deprive citizens of their liberty on the most ridiculous pretexts." It may be that these drastic powers are seldom exercised, as no great dread seems to exist in Manchester among quiet and orderly people of sudden arrest and incarceration, and no one seems to compare Manchester with St. Petersburg or Moscow, but evidently the citizens must walk circum-spectly. In spite of Mr. Bagley's protest and the willingness of the two sons of the patient that the police should have full control of their father in his own home the man was removed to the hospital. A leaderette in one of the local papers takes a sensible view of the matter:—

> To remove from his home and friends an old man of 65 who was suffering from the shock and loss of blood following a self-inflicted wound was, on the face of it, a more or less risky proceeding. To do so in defiance of the doctor's orders and in spite of the willingness of the relatives to have the man kept under police surveillance in his own home was a course of action which it requires not only legal right but imperative legal obligation to justify.

The decision of the magistrates was that "the arrest was not strictly legal, and although the officers may have been rightly in the house, they had no authority without a warrant to make an arrest for a misdemeanour. Consequently the officers were not acting in the execution of their duty when the assaults and obstruction were complained of." Putting aside, however, the legal question, and viewing the matter from "the standpoint of public safety and common humanity," our profession generally will agree with a resolution passed by the Salford division of the British Medical Association: "That this meeting considers it a highly dangerous procedure for the police to remove any patient in opposition to the opinion of the medical attendant in charge," and with the opinion of the meeting that if harm resulted from the removal of a patient against medical advice the question of responsibility might be extremely serious. Everyone will sympathise with Mr. Bagley in the annoyance which these proceedings must have caused him.

The Whisky Trade.

A statement made by a bankrupt wine and spirit traveller of Blackpool at his examination on Feb. 8th will be to some of us a revelation. He said that there were over 500 brands of special whiskies on the market. If these 500 varieties can be distinguished by special peculiarities the skill shown in their manufacture must be almost miraculous. One of his statements can readily be believed, that the various firms fight vigorously one against another. His own case seemed to bear out the fact of the fierce competition amongst them.

Food Analysis.

According to the report of the city analyst, Mr. C. Estcourt, for the quarter ending Dec. 31st last, Manchester comes out fairly well as to food adulteration. The samples of milk adulterated were only a fraction over 3 per cent. Butter showed a still better return; of the samples submitted, under 2 per cent. were adulterated, while none of them contained more than 16 per cent. of water, the limit allowed by the Board of Agriculture. To beer drinkers it will be consoling to learn that all the samples submitted were practically free from arsenic. The drugs examined were of good quality. Altogether 826 samples were analysed and 20 were found to be adulterated.

Feb. 12th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

Meeting of the University Court.

A MEETING of the court of the University of Leeds was held on Feb. 6th, under the chairmanship of the Pro-Chancellor, Mr. A. G. Lupton. The annual report for the year 1905–06 showed that the number of registered students had increased. The total sum paid in students' fees amounted to £13,578, which was an increase of about £900 on the former year. The income of the University from all sources reached £51,000, and a balance of income over expenditure—small indeed and amounting to only £323—was an unusual feature of the balance-sheet. From the report of the Vice-Chancellor it appeared that the number of students attending classes in the medical department was 143. This does not represent the full total number of medical students in Leeds, as there are some in attendance at the infirmary who from various causes may not be on any of the class lists at the medical school of the University. It is of interest to note that lectures in some of the courses of dental instruction have now begun in the University and that the Vice-Chancellor in his report just referred to comments on the establishment by ordinance of the degrees of B.Ch.D. and M.Ch.D., there being now full facilities in Leeds for students attending a full curriculum of clinical dental instruction at the newly equipped department of dentistry at the Leeds Public Dispensary. The Pro-Chancellor, in his address to the members of the court, announced that towards the additional £100,000, which the Privy Council had required should be raised to complete the endowment of the University on its establishment, the sum of £82,000 had been collected and he made an earnest appeal that no efforts should be spared to insure that the balance should be obtained at an early date.

Appointment at the General Infirmary.

In consequence of the appointment of Mr. Joseph F. Dobson as assistant surgeon to the infirmary, there resulted a vacancy in the position of assistant surgeon to the Ida and Robert Arthington Convalescent Hospitals which are under the management of the infirmary. At a meeting of the special election committee, held on Feb. 8th, Mr. Harold Collinson, M.B., B.S. Lond., F.R.C.S. Eng., was selected for the post. Mr. Collinson was a Leeds student and filled all the junior resident surgical appointments, after which he was elected resident surgical officer and more recently surgical registrar.

Provision of Open-air Swimming Bath.

Though Leeds is probably as well provided with swimming baths as most other towns of its size, these baths are all under cover and the facilities for the more satisfactory recreation of bathing in the open air, if indeed they can be said to exist at all, are of the most restricted nature. The parks committee of the city council has made a recommendation that a large open-air swimming bath should be constructed at Roundhay Park. There is already in this large park, which is situated about three miles from the centre of the city, a large sheet of water known as the Waterloo lake, on which boating is indulged in and where fishing may be had. This piece of water was secured many years ago by the building of a dam across the lower end of a valley through which a fair stream of water ran. It is now proposed to construct on the well-wooded area of ground some distance below the dam an open-air swimming pond of graduated depth and the scheme is being pressed by the various swimming clubs of the city. The total cost, it is estimated, will be about £1200, of which about £800 would be expended on wages. The alternative suggestion of Mr. Alderman Lupton that a kiosk should be constructed at the side of the large lake or a floating bath on its surface is well worthy of consideration.

The Hospital for Women and Children.

The president of the Hospital for Women and Children, Mr. Henry Barran, when acting as chairman of the annual meeting which was held on Jan. 30th, took occasion to refer to the increase of expense which has of necessity resulted from the work being carried on in the larger premises afforded by the new hospital, an increase which was also an expression of the greater amount of work which was being done. The necessary annual expenditure had increased by £1500. The committee had, he said, succeeded in raising the annual income by £800, and it was their work now to secure increased annual subscriptions so that the hospital work should be efficiently carried out without the expenses exceeding the income. During the last few years a debt of £1600 had accumulated. Many ladies from the county and city of Leeds have interested themselves in the matter and it has been arranged to hold a bazaar in aid of the institution next November. Meanwhile an influential committee of about 50 ladies and gentlemen has been formed and it is hoped that the effort will be attended with success.

Portraits of Professor Clifford Allbutt and Mr. Pridgin Teale.

Many old Leeds students will be interested to learn that a movement has been initiated to give some tangible expression of the esteem and affection in which two of their former teachers stand with the public and with the profession of the city in which so much of their work has been carried out, in so far as it is possible to do so, by arranging that their portraits should be painted. Professor T. Clifford Allbutt was honorary physician to the General Infirmary from 1864 to 1884. His work at the infirmary did much for the reputation of that institution, the brilliancy and charm of his teaching added renown to the Leeds School of Medicine, his position as a consultant in the north of England was unique, and everyone knows that his loyalty to his professional brethren not only made him universally admired but was a powerful influence in developing those feelings of good fellowship which ought to exist among men practising in the same district. Of Professor Allbutt's colleague and intimate friend, Mr. T. Pridgin Teale, whose connexion with the infirmary corresponds in point of duration with that of his own, I might use almost the same form of words. Professor Allbutt left Leeds in 1889 to the great loss of the city but to the ultimate benefit of his own *alma mater* of Cambridge. Mr. Teale is happily with us 23 years after his retirement from the full staff. It is only within the last few years that he has given up his consulting work as a surgeon and he is still as keenly interested in many matters outside the sphere of strictly professional work as ever he was. It is a source of pride to the present acting members of the honorary staff of the infirmary that Professor Allbutt and Mr. Teale are still members of the honorary consulting staff of the institution.

Feb. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Cerebro-spinal Fever in Scotland.

THE health returns for the city of Edinburgh issued by Sir Henry Littlejohn last week showed that six cases of cerebro-spinal fever occurred during the week with four deaths. On Monday another case was reported from Leith. The public health department is on the *qui vive*, and thorough disinfection has been carried out at the homes of the patients. In Glasgow the disease is still spreading, while cases are now reported at Paisley, Haddington, Greenock, Bothwell, Kirkaldy, Falkirk, Hawick, and other places, so that the sanitary authorities in Scotland are undergoing a very anxious time. Six deaths were reported in Glasgow yesterday, with 71 cases in hospital. An order was issued by the Local Government Board on Monday enjoining medical officers of health to report to the Board as well as to the local authority the occurrence of all fresh cases and the particulars of any steps taken in connexion therewith, while the local authorities are also advised to extend notification to cerebro-spinal fever.

The Carnegie Trust: Reform required in the Universities.

A long, elaborate, and important statement has been sent by the secretary of the Carnegie Trust for the Scottish Universities to the four universities concerned. Only the part which deals with the faculty of medicine will be referred to here. It points out with regard to the preliminary examination that in 1902 the committee intimated that after a certain interval an approximately uniform test of preliminary education would be applied to all beneficiaries of the Trust. This will come into operation next winter session and the regulation runs thus:—

> In the Faculty of Medicine a beneficiary must have passed the arts or science preliminary examination, or have obtained the leaving certificate of the Scottish Education Department, and must have satisfied in either case the requirements of the Scottish Universities' Joint Board as to medical preliminary examination.

The statement then passes to discuss the proper organisation of the beneficiaries in their studies in medicine. Under the ordinances of the commissioners there are four professional examinations and were it possible to coördinate the classes and studies of the beneficiaries on the lines of those examinations the task of the committee would be simple enough. They would merely have to apply the principle which they have applied in the arts faculty and to refuse to pay the class fees of a further stage of study until the examinations belonging to a previous stage had been completed. Such an arrangement is regarded as impracticable at the outset of the curriculum, for anatomy is begun before the first professional examination is passed. This overlapping proceeds right through the curriculum and the undesirability is fully recognised, and yet the committee feels that it cannot enforce in the faculty of medicine the regulation suggested for the faculty of arts that examinations belonging to a previous stage must be passed before entering upon a further stage. At the same time it seems all-important, judging from the experience of the Trust during the past five years, that in medicine some distinct division should be made at least between the more purely scientific and the more purely professional halves of the medical curriculum so as to prevent any undue delay in completing the one leading to an undue compression or congestion of the other, that is to say, that arrangements should secure that the student shall have three full years of study after passing his examinations in anatomy and physiology. Although this is the opinion of the Trust it is felt that it would be unfair to enforce it as the ordinances at present in force definitely prohibit a student from entering for his professional examination in anatomy and physiology until the end of his third winter session. It is further recognised that the universities themselves cannot help the committee in this matter without

collectively or severally obtaining some amending ordinance or ordinances. This statement by the secretary of the Trust is remarkable for its calmness and fairness and for the directness with which it deals with the present defects in the medical curriculum. It ought to contribute materially to the education of the public mind as to what has become an urgent necessity—namely, that the universities should have much greater freedom than they at present possess. The last draft ordinance drawn up by the University of Edinburgh with the object of making necessary changes in the medical curriculum has, as is widely understood, been blocked by one of the other Scottish universities.

The Edinburgh Royal Medical Society.

The annual dinner of this ancient society was held on Feb. 7th. Professor W. Osler of Oxford was the guest of the evening. The toast of their guest was proposed by the senior president of the society in appreciative terms and was happily replied to by Professor Osler. The toast of "The Society" was in the hands of Professor Osler who made a long and interesting speech, drawing attention to the names of many of the eminent men of the seventeenth century and later who had been members of the society. The most interesting part was where he referred to a large number of men who had been the founders of medical schools and institutions in Canada and in the United States who had been educated in Edinburgh and had also been members of the society, and had taken Edinburgh methods and the traditions of the Edinburgh school and of the society to the west. On Feb. 8th Professor Osler addressed the students on cerebro-spinal fever. The lecture was to have been delivered in the largest theatre in the infirmary, but it was found quite inadequate to accommodate the crowd of students and graduates who wanted to hear it; it was therefore transferred to the McEwan Hall, and even there the audience filled the entire area, while many of the infirmary staff accompanied him to the platform. He got a great reception from the students and was listened to with the closest attention.—At a meeting of the society held on Feb. 8th Professor D. Noel Paton, of the University of Glasgow, gave a lantern demonstration on the Origin of the Amniotic and Allantoic Fluids. After discussing the various theories held by different investigators as to the source of these fluids, Professor Paton described a series of experiments conducted by himself in conjunction with Mr. Kerr, B.Sc., and Dr. B. P. Watson. From the results of these experiments he concluded that the fluids were fœtal rather than maternal in origin, and were secreted chiefly by the kidneys of the embryo.

The Principalship of the University of Glasgow.

The medical graduates and students of Glasgow are congratulating themselves on the appointment of Dr. Donald MacAlister as Principal. I need not recapitulate, as they must be well known to your readers, the strong claims of Dr. MacAlister upon any academic position which he may desire to fill.

Royal Visit to Glasgow.

The Lord Provost has intimated that their Royal Highnesses the Prince and Princess of Wales propose to visit Glasgow on April 23rd in order to inaugurate the new buildings at the University and to lay the foundation-stone of the reconstructed Royal Infirmary, which is to be the Diamond Jubilee memorial of the late Queen Victoria. The new buildings which will be inaugurated at the University were sanctioned by the University Court in 1903 and both are now practically complete. The larger of the two, erected at a cost of £60,000, is to be devoted to the purposes of physiology, materia medica, forensic medicine, and public health. The other is the new building for the department of natural philosophy, but the medical faculty will also benefit by its erection, as in it first-year medical students will be accommodated for their instruction in a course of physics. The medical building occupies a site on the south side of the main road which extends from the front of the University buildings to the Western Infirmary.

A Medical Officer in the Highlands.

A considerable amount of feeling has been raised in the district by the action of the parish councils of Kintail, Glenshiel, and Lochalsh in dismissing Dr. George Duncan who has been medical officer of these parishes for 50 years. It is alleged that the dismissal has been prompted by motives which ought not to be allowed to enter into the relationship between a council and its medical officer. A strongly worded petition has been drawn up and has already obtained 700 signatures amongst the inhabitants of the three parishes; this is to be sent to the Local Government Board.

Feb. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Increase of Lunacy in Ireland.

DURING many years statements alleging a serious increase in the number of persons suffering from lunacy have appeared but have been partially explained away by reference to the improved methods of registration and to the fact that many harmless lunatics and idiots who were formerly allowed to wander in country districts are now lodged in asylums. There cannot, however, remain any doubt now that there has been an increase in the number of patients requiring treatment for lunacy. At a special meeting of the joint committee of management of the Richmond District Lunatic Asylum held on Feb. 1st Alderman Irwin, chairman of the finance committee, furnished an elaborate and satisfactory report in reference to the money affairs of the asylum. He said that he thought it his duty to refer also to another important subject and reminded his hearers that the resident medical superintendent had recently stated that the question of accommodation was again becoming a matter for serious consideration. For the year 1898 the daily average of patients on their books was 1958 as compared with 2876, the daily average number resident during 1906. In a period of eight years, therefore, there had been an increase of no less than 920 patients. The Richmond Asylum buildings were overcrowded again, the Portrane Asylum permanent buildings were absolutely full, portions of the wooden structures which were only erected to provide temporary relief in a pressing emergency were recently occupied, and their only present resource was that afforded by the remainder of the temporary buildings at Portrane. He said that the returns received from the board of guardians and contained in the report just read placed beyond the region of controversy the sad fact that the number of the insane had enormously increased and that this increase was continuous. They had reached a grave and alarming crisis—Richmond was overcrowded and Portrane, recently provided at a capital charge of £370,000, was full. He suggested that Mr. Conolly Norman, the resident medical superintendent, should be requested to prepare a report on a means of segregating their patients and providing for some of them elsewhere. This suggestion was adopted and also the report in full.

University Question in Ireland.

Nothing has recently occurred pointing towards a solution of the University problem, which seems, indeed, to become more complicated every day. On Feb. 8th an influential and largely attended meeting took place at the Queen's College, Galway, to protest against Mr. Bryce's scheme (mainly because it did not include that College). A deputation was appointed to wait on the present Chief Secretary. This meeting was presided over by the Roman Catholic Archbishop of Tuam.—A meeting of the governing body of the Catholic University School of Medicine was held on Feb. 6th under the presidency of Dr. Walsh, Roman Catholic Archbishop of Dublin, when the following motion was carried unanimously:—

> That a settlement of the University question on the lines laid down by Mr. Bryce would be acceptable to this faculty, provided that the details of the Bill are satisfactory to the Catholic hierarchy and laity, and that a real equality as to equipment and autonomy, as compared with Trinity College, Dublin, is given to the new college.

On the other hand, Dr. B. C. A. Windle, president of the Queen's College, Cork, said in his presidential address on Feb. 7th that the declaration of Mr. Bryce was a disappointment to him as to others interested in securing a local university.

Cerebro-spinal Fever in Dublin.

Four cases of cerebro-spinal fever have been reported in Dublin since I last wrote, of which one, a child, died. Sir Charles A. Cameron, the medical officer of health of the city, has taken every possible precaution and feels hopeful that,

with the coöperation of the medical profession, the unwelcome visitor may soon be beaten away. He has stated that there was no doubt as to the disease from which the child died, but about the other suspected cases there was still a doubt.

Outbreak of Diphtheria.

Diphtheria has broken out in the district of Limavady (co. Derry) and in the neighbourhood of Newry (co. Down).

Cerebro-spinal Fever in Belfast.

This deadly disease is still spreading in Belfast and is appearing all over the area of the city, especially among the children of the poor. In all, up to to-day (Feb. 12th), 68 cases have been notified, with a mortality of about 50 per cent. At the Ulster Medical Society on Feb. 7th interesting communications were made on the subject by Dr. W. St. Clair Symmers, professor of pathology, and Dr. A. G. Robb, physician to Purdysburn Fever Hospital. Professor Symmers detailed the post-mortem appearances in five cases, in four of which suppurative meningitis was marked, implicating the vertex, sides and base of the organ and extending along the spinal cord. In two cases there was suppurative pericarditis, and in four marked engorgement of the lower lobes of the lungs. The mesenteric glands were in all cases enlarged and hyperæmic. Dr. Robb gave details of 37 cases received at the Purdysburn Hospital between Dec. 29th and Feb. 7th, observing that his notes would only convey a rough impression of the main features owing to the short time during which the cases had been under observation. The diagnosis was in no case in doubt and 16 of the children were already dead. Dr. Robb recognised the usual classification of the disease into four varieties of type: (1) "the ordinary"; (2) "the fulminant"; (3) "the abortive"; and (4) "the chronic"; and he thinks that a fifth, or "mild" class, should be added. He detailed the symptoms, saying that in all the cases the onset had been very sudden, headache, fever, and vomiting being quickly followed by rigidity of the neck, retraction of the head, and delirium, often maniacal. The temperature has generally been considerably raised, but, especially in the severer cases, the pulse has been irregular and slow, a pulse-rate of 60 associated with a temperature of 104° F. having been present in some of the most quickly fatal cases. Squint, nystagmus, purulent conjunctivitis, cloudy cornea, and nasal and aural discharges have been present, and enlargement of the cervical, axillary, and inguinal glands was observed in the majority of the cases. Herpes was marked in five cases, erythema and urticaria in several others, but the petechial rash generally associated with the disease, and giving to it the name of "spotted fever," was only found well marked in two cases. Looking at the outbreak as a whole, Dr. Robb pointed out that it was much more closely related in general clinical features to epidemic pneumonia than to any other form of disease commonly classed as infectious.

Feb. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Weekly Day of Rest in the Hospitals.

THE weekly day of rest is not yet carried out in the service of the Assistance Publique. M. Mesurier, the director of the Assistance, in order to be able to grant one day's rest per week to his staff, has asked the Municipal Council to give him 730 new members of the staff, the average annual salary of a nursing member of the Assistance being 600 francs and 530 francs for a member of the servant staff. On consideration these figures are reduced to 600 as the number of new members of the staff who are to receive from 510 to 575 francs. It is calculated that the total cost of one day's rest per week for the Assistance Publique will be for the present year some 600,000 francs.

Eruption in a Worker in Vanilla.

At the February meeting of the Society of Dermatology and Syphilography M. Gaucher and M. Malloizel said that they had recently had under their charge a worker in vanilla who suffered from an eruption on the face and on that portion of the chest which corresponded to the amount of skin exposed when his shirt was open. The workman of his own accord said that his sufferings were due to the irritating action of formol. This declaration only confirmed a fact which has already been made known by M. Gaucher that in order to remove mould from the vanilla pods they are treated with formic aldehyde with which the pods are washed and brushed. Women who undertake this work without gloves show an eruption on the hands and men who dip the vanilla pods in the solution and who wear indiarubber gloves have no eruption on the hands but they do have one on the chest and on the face. It would appear from these facts then that the eruptions from which workers in vanilla suffer are due in some cases to the action of formol and not to the odorous principles of the vanilla or to the moulds with which the pods are sometimes covered.

Feb. 12th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Newspaper Comments on Professor von Behring.

A SINGULAR controversy in which Professor von Behring is the most prominent figure has arisen through certain newspapers inserting paragraphs stating that he had been conveyed to a sanatorium because of serious nervous trouble. These assertions, though repeatedly contradicted on competent authority, nevertheless continue to appear, and it is remarkable that they are principally to be found in French newspapers. Writing to the *Frankfurter Zeitung*, Professor von Behring himself accuses the French press, and especially the medical member of the staff of the *Figaro*, of having done their best to spread these rumours. According to him a group of French medical celebrities envying his success in combating tuberculosis have misused their influence with the press for the purpose of representing him as a victim of mental aberration, and by this mode of attack they hope to undermine his scientific position so that they may on some points claim priority for themselves. This letter to the *Frankfurter Zeitung* denounces several individuals, among whom the Dean of the Paris Faculty of Medicine is expressly mentioned by name. The highly polemical tone adopted by Professor von Behring will certainly not tend to stop the publication of hostile comments, and it must be remembered that this style of controversy is obviously very much to his taste because he attacked in the same manner the late Professor Virchow, Professor Koch, and the Prussian Government likewise, the last because it has not sufficiently supported his (Professor von Behring's) work. The newspapers, in reporting the facts, mostly abstain from expressing an opinion on the issues involved, but some of them say that so celebrated a man as Professor von Behring should be above taking part in acrimonious disputes as to priority in medical discoveries. In the recent numbers of the French papers the medical men named by Professor von Behring deny that they have made any personal attack on him.

A New Urethroscope.

At a recent meeting of the Berlin Medical Society Dr. Goldschmidt showed an apparatus for the endoscopic examination of the urethra. By the usual cystoscopes only a small area of the urethra is made visible, and the folds of the urethral mucosa surrounding the instrument are a hindrance to obtaining trustworthy results. The instrument devised by Dr. Goldschmidt dilates the urethra by water pressure so that a great portion of the canal may be examined. He showed a great many lantern-slides depicting different morbid conditions of the urethra as seen with the new instrument.

Death of Herr Bödiker.

Herr Bödiker, formerly President of the Imperial Assurance Office, died in Berlin on Feb. 5th. Although he was not a medical man the degree of M.D. *honoris causâ* had been conferred on him by the University of Göttingen; he also held the degrees of doctor of law and doctor of philosophy conferred by other universities. The work of his department was from its nature closely connected with that of the medical profession, and in carrying it out he displayed remarkable ability. When Prince Bismarck about 25 years ago endeavoured to check the socialist agitation among the working classes by various domestic reforms, and especially by insurance against illness, accidents, old age, and permanent incapacity for work, Herr Bödiker, who had always been interested in these questions, was appointed a member

of the Imperial Home Office. Here he had the special duty of preparing certain Bills which the Government were about to bring before Parliament. Although the scheme was a complete innovation, inasmuch as laws of that kind did not exist in any other country, Herr Bödiker showed such energy in the performance of his difficult task that the laws on the insurance of workmen against illness came into operation in 1883, those on insurance against accidents in 1884, whilst those on insurance against old age and permanent incapacity for work followed in 1888. By these laws every workman, whether employed in factories, or in mines, or in agriculture, or in any branch of a trade, is insured against illness for 26 weeks; he is further entitled to have the rent of his house or lodgings paid for him in the event of his suffering from an accident or from an internal disease which may have been caused by an accidents. The funds for insurance against illness and permanent incapacity for work are collected by weekly contributions from the workmen to the extent of two-thirds of the total amount, the remaining one-third being paid by the employers, whilst the funds for insurance against accidents are contributed by the employers only. A special administrative body and a supreme court to deal with questions of litigation in matters concerning the workmen's insurance were created in 1885 and Herr Bödiker was made the president. By the leniency of its decisions, which took account not only of the legal side of a case but also of the special conditions of the working classes, the Imperial Insurance Office, under the presidency of Herr Bödiker, gained the confidence of the working classes, who at first were opposed to these laws. The above legislation had also a great influence on the medical profession. As a great portion of the population of Germany had to belong to some club or other and when suffering from illness, accidents, or permanent incapacity for work, had to apply to the medical officer of the insurance institutions, the conditions of practice, especially in towns or districts including a large industrial population, became greatly modified. Not only the social but also the scientific side of medicine was affected by Herr Bödiker's work, for special branches of medical practice bearing on insurance received a great development, as new questions for which no precedent existed had to be decided by the medical men holding appointments in connexion with the insurance laws. Herr Bödiker will be long remembered as one of the great benefactors of the working classes, not only of Germany, but also of those countries which have followed his plans in their legislation.

The Preliminary Education of Medical Students.

Until the year 1900 only those young men could matriculate as medical students who had passed their abiturienten-examen (final school examination) at the schools known as gymnasia. The gymnasia in Germany lay stress on classics and therefore this examination includes a good deal of Greek and Latin, together with German, mathematics, and French. In 1900, however, young men were admitted to the study of medicine after receiving the education provided in the realgymnasia, where the subjects of instruction are principally modern languages and mathematics, with no Greek and very little Latin. The Federal Council has recently decided that the final examinations at an oberreal-schule may also entitle young men to enter upon the study of medicine. In the oberreal-schule no classical languages are taught, the subjects being principally modern languages and natural science. Hitherto young men coming from such schools could only matriculate after having previously passed a supplementary examination in Latin. This is now abolished and they will become duly matriculated medical students without such a condition, but they will have to show at their first medical examination that they know enough Latin to understand the technical terms. The classical languages have held a preponderant position in the study of medicine in Germany ever since the mediæval period, but this ascendancy, which began to be limited in 1900, has now nearly ceased and a great afflux of aspirants to the study of medicine will certainly be the sequel. This will be the more the case as the legal and theological professions continue to admit only candidates who have received their education in a classical gymnasium.

The German Surgical Congress.

The Congress of the German Surgical Association will meet at Berlin from April 3rd to 6th under the presidency of Professor Riedel of Jena. The following subjects will be discussed: (1) Operations on the Heart and the Pericardium—to be introduced by Professor Rehn of Frankfort; (2) Operations on the Lungs—to be introduced by Professor Friedrich of Greifswald; (3) Removal of the Prostate Gland—to be introduced by Dr. Kümmell of Hamburg; and (4) Fracture of the Femur—to be introduced by Professor Bardenheuer of Cologne and Professor König of Altona.

Feb. 11th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The Riviera.

FROM Nice to San Remo, from Alassio to Viareggio, from Pisa to Naples, from Amalfi to Palermo, all the sun traps on that lovely seaboard are beginning to throw off the rigours of winter and, with these, the influenza which was undoubtedly rife in the more northerly ones. Early in the year consultants were more than justified in putting their veto on a contemplated sojourn on the Riviera Ponente and, in a less degree, on the Riviera Levante; but now the "contra-indication" has died out and the veto has been withdrawn. There are, however, precautions to be observed if the sojourner is to reap the full benefit of the change (climatic and other), and prominent among these is that relating to diet. The boycotting of many tinned foods and "portable" soups has already diminished the use of these in the *cuisine* of the better class of hotels—a proof of the self-protecting power possessed by the travelling public, if only it is exercised systematically and steadily. But there is at least one very popular *viande* not included in the above category against which hygienic authority is at present making its voice heard—namely, "the classic oyster." From Toulon westwards, eastwards, and southwards, the public are being warned against the "ostrica Mediterranea," cultivated as these often are in conditions far from sanitary, in beds notoriously subject to river pollution where (perhaps fortunately!) no "close time" is thought of, much less put in force. The December of last year was signalised by a true epidemic of typhoid fever, extending from the Provençal litoral as far inland as Lyons, and its cause was found in diseased oysters imported by the ton from Cette. Now the conditions of oyster culture on the Italian seaboard are, to put it mildly, not superior to those on that of France or of Spain—indeed, the Neapolitan Riviera has only partially lived down the evil reputation that clung to it with truly "molluscous" tenacity for "infected oysters." Unless kept up to the mark by vigilant and impartial inspection (bacteriological and other) oyster culture is prone, in Mediterranean waters particularly, to relapse into the old "trascuranza" (carelessness), so fraught with danger to the unsuspecting consumer. But it is satisfactory to know that such inspection, now in official hands, is being effectively reinforced by a forewarned public which "boycotts" what it suspects, and, as in the case of tinned meats, "preserved" vegetables, and "portable" soups, so in that of oysters can improve the quality of the article supplied by opportunely withholding the demand.

Milk and Tuberculosis.

In this connexion it may be well to draw attention to the ample and searching discussion just brought to a close in the Royal Academy of Medicine of Turin on the milk-supply of Italy as an active agent in predisposing to tuberculosis, if not of directly causing it. From the Academy to the press, professional as well as lay, the discussion is still evoking illuminative comment, and when this has run its course I shall sum up the net results in future correspondence, merely remarking in the meantime the wisdom of the public in exercising prudence in the consumption of the milk supplied to it in Italian health resorts.

"The Septic Touch."

The warning conveyed by THE LANCET under this title has not been thrown away on Italy, where the paper currency, particularly the 10-franc and 5-franc notes, is liable to become so filthy as to make not only the English-speaking world but even Italians themselves think twice before handling it. So much is this the case that money-changers when cashing cheques are often asked for gold instead of paper, though at the sacrifice of the not inconsiderable *agio*, while the demand for clean or

tolerably unsoiled notes is far greater than the said money-changers can satisfy. In these circumstances the announcement will be not unwelcome that a fresh series of 5-franc notes is about to be issued, necessitating the preliminary withdrawal from circulation of the "prolific agents of infective disease" now passing from hand to hand. 10-franc notes of a fresh type are also to be re-issued, and, like the 5-franc notes, on a less hideously inartistic design. These latter, indeed, have long awakened the mirth, when not inspiring the horror, of Italians, likened as they are in their garish colouring to "cartellini da bottiglia" (bottle labels) or to "biglietti tramviari" (tramway tickets). Besides, adds the *Secolo*, they lend themselves easily to falsification, though it must be confessed the falsified notes in circulation are few. "They were too ugly. Even the forgers drew the line at them!"

Feb. 5th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Selling of Drugs to the Public without Medical Prescription.

SEVERAL fatal cases are reported due to the selling of medicines to the public by druggists, &c., without any medical prescription. There exists a law in the Ottoman Empire prohibiting such sale. But this law seems never to have been enforced strictly, and all sorts of drugs, oftentimes most poisonous, have been sold by every possible shop in possession of them to every person on mere demand. The abuse was especially great with regard to proprietary articles the composition of which was frequently quite unknown. No wonder that the public is exposed to very grave dangers and that often fatal results follow such an indiscriminate sale. The law of prohibition entrusts the whole matter to the prefecture of the city and this in its turn has to see that every medicine, pharmaceutical preparation, and the like should be sold to the public only by authorised and duly qualified pharmacists and officially recognised specialists and only then when a properly signed prescription of a medical man is presented. There are, however, many good laws and regulations in Turkey which often remain a mere dead letter, as there is no strong will and hand to compel and to put in execution. Lately a new official communication has been sent to all the pharmacists and druggists of the capital reminding them of the injunctions of the law referred to above and of the penalties that will follow the further indiscriminate sale of drugs.

Unusually Severe Winter.

Snow has been falling in Constantinople continuously for several days, and, what is quite an unusual occurrence on the banks of the Bosphorus, is lasting. The thermometer is several degrees below zero. Such severe winters are very rare in Constantinople. As a rule there is here little snow in winter, the weather being generally very mild at this time of the year. Winter is for Constantinople the season of rains and snow usually melts as soon as it falls. I was greatly astonished to see the other day people driving in a sleigh. Such weather tells badly on the health of the public. Most of the houses are very lightly built and no provision is ever made to meet a severe and lasting winter. The mass of the people, especially among the poorer classes, are suffering greatly from the inclemency of the weather. The Sultan has ordered that 1000 Turkish liras should be distributed from his private purse among the sufferers. He also ordered, says the *Levant Herald*, the payment of the sum of 14,000 Turkish liras to the fund for the relief of the victims of the disastrous floods in the vilayet of Aidin.

A Sanatorium for Bucharest.

The local newspapers bring the news that a society has been formed at Bucharest, under the patronage of the Queen of Roumania, with the purpose of creating in that city a sanatorium for tuberculous patients. This sanatorium will bear the name of Saint Elizabeth. The society is already in possession of the sum of 310,000 francs, of which 119,000 francs have been contributed by the Queen. The magnificent villa called "Ghica" has been bought and will be equipped and furnished with all the necessary requirements of modern medical science to make the sanatorium an establishment in every way up to date.

Jan. 25th.

Obituary.

EMILE JAVAL.

THROUGH the death of Dr. Emile Javal, on Jan. 20th, at the age of 67 years, the profession has lost a very distinguished member, a man known throughout the world as one who played an important part in the development of modern ophthalmology and conspicuous also in his own country as a politician, an educationist, and a social reformer. Trained as a mining engineer, endowed with exceptional mental power, and attracted by every problem, physical or biological, which came in his way, he interested himself in the case of a child, a near relative of his own, who suffered from convergent strabismus, and conceived the idea that the stereoscope should afford the means of re-establishing the lost faculty of binocular vision. He undertook the attempt and persevered in it for a series of years. The success obtained, though not complete, threw new light on many of the visual phenomena which arise in this disorder. Convinced of the value of his observations, he abandoned the mining profession and took to medicine; became later a pupil of von Graefe, translated into French the "Physiological Optics" of Helmholtz, and pursued with energy and ingenuity his special study and treatment of strabismus for many years. His results are finally set forth in his "Manuel du Strabisme," published in 1896. To him chiefly we owe the knowledge that the faulty vision of a squinting eye may frequently be improved, and that even the lost power of "fixation" may be restored by dint of compulsory education, and that true binocular vision is often recoverable by means of stereoscopic and other educative exercises even though, under other treatment, it has been long in abeyance. He expressly warns us, however, that the time and trouble involved in achieving these results are sometimes out of all proportion to their value when ultimately attained. He dedicates the book to one who "from my earliest infancy inspired me with that love of truth which is the foundation of all scientific research, and with that desire to be useful which has sustained me through all my work."

Dr. Javal's name is known, probably, even more widely in connexion with his ophthalmometer than with his more extensive work on strabismus. The principle of the ophthalmometer, the instrument which enables us to measure the curvature of the cornea and lens by means of images reflected from their surfaces, we owe to the genius of Helmholtz. The simplified instrument with which we can now, without calculation and without a dark room or complicated illumination, rapidly read off in equivalent dioptres of refraction the astigmatism of the cornea, we owe to Javal and his Norwegian collaborator in the ophthalmological laboratory at the Sorbonne, Schiötz. The history of clinical ophthalmometry is to be found in a volume, "Mémoires d'Ophtalmométrie," containing a large number of papers by many writers, European and American, and edited by Javal. Again, we are largely indebted to him for the general adoption of the metric system in the numeration of lenses, and for the use of the star or fan, together with cylindrical lenses, in the estimation of astigmatism.

Interested in many questions outside his professional work he aided as a journalist in the diffusion of Liberal ideas. For a while he was a Member of the Chamber of Deputies and did useful work, both in committees and in the House, in connexion with the hygiene of schools and the question of decreasing population; his knowledge of the latter subject aided M. Zola in the production of his well-known work. During the Dreyfus trial he went to Rennes and exerted himself on the side of the accused.

In 1885 his right eye, in spite of skilful treatment, was blinded by glaucoma. In 1900 he came to England for the treatment of the fellow eye which was in perilous condition; it had suffered many transitory attacks and had, incredible as it may seem, been kept more or less constantly under the influence of pilocarpine during 15 years of active work. An iridectomy gave, for a short time, a promise of success, but relapse after relapse occurred, and in spite of constant treatment during five months the eye became blind. Later, in Paris, by his own desire, the cervical sympathetic was divided, but without benefit to sight. No sooner had he recovered from this long ordeal, borne with philosophical fortitude, than he set himself to

study the means by which the lot of those who lose their eyesight during active adult life may be ameliorated, and three years later issued a volume, "Entre Aveugles," which has been translated into many languages, the English version bearing the title "The Blind Man's World." It gives counsel to the blind and to their friends on such matters as occupation, attention to health, the dwelling, management of meals, watches and clocks, exercise (including tandem-cycle riding), travelling, reading aloud, handwriting and typewriting (Braille), music, games, smoking, marriage, &c. It is a fine instance of valuable work planned and carried out under a calamity which to many would be entirely overwhelming.

Two years later, in 1905, appeared another important work, "Physiologie de la Lecture et de l'Écriture," a subject to which Dr. Javal had devoted attention during many previous years. It describes the evolution of written and printed characters, including those used in stenography, in musical notation, and in relief-writing for the blind. It minutely discusses the principles on which letters should be formed in order to afford the maximum legibility and shows that those now in use are in many respects so faulty as to be "an offence to common sense." His characteristic philosophy reveals itself in the following sentence. "I think that he who should rid humanity of the confusion which, in rapid writing, arises between the *u* and the *n*, would not have to regret his trouble, even if his whole life had been devoted to this small achievement. What is the duration of a single life as compared with the centuries represented by the saving of one minute each day to a hundred millions of human beings?" The book is of great interest and should lead, in course of time, to valuable reforms.

Last year Dr. Javal was invited by the council of the Ophthalmological Society of the United Kingdom to deliver the Bowman lecture of 1907, but was obliged by the state of his health to decline the honour. He was made nevertheless an honorary member of the society as a sign of the high value which is placed in this country upon his services to ophthalmology.

DAVID HEPBURN, L.D.S. R.C.S. ENG.

BY the death of David Hepburn the dental profession has suffered a great loss. Born in 1851, Mr. Hepburn received his professional education at the Middlesex Hospital and the Dental (now the Royal Dental) Hospital of London. One of the earliest students at the school attached to the latter hospital, which in his day was situated in Soho-square, Mr. Hepburn early showed that enthusiasm for work and for the best interests of his profession which has been so conspicuous throughout his life. As house surgeon, a post he obtained after a distinguished career as a student, as dental surgeon, and later as lecturer on mechanical dentistry, he displayed gifts of energy, bonhomie, and adaptability and was as successful and beloved as a teacher as he had been as a student. The Students' Society was one of his creations and he was an early and popular president, while another undertaking with which his name will always be remembered is the annual dinner for past and present students which he not only inaugurated but of which he was for many years the life and soul. Mr. Hepburn, with the support of some of those who shared his views upon the subject, conspicuous among whom was Mr. Morton Smale, then and for many years Dean of the school, initiated the appliance department of the Dental Hospital to facilitate and to improve the teaching of mechanical dentistry to students. The scheme was strongly opposed at the time and it was not accepted until the results, in no small measure due to Mr. Hepburn's management and indefatigable energy, proved the wisdom of the new departure. An active member of the British Dental Association, he devoted much time as secretary of its publishing committee and in many ways furthered the work of the association. While serving upon the medical committee of the Royal Dental Hospital as an ordinary member and later as its chairman Mr. Hepburn's straightness of purpose and strong personality did much to promote the growth of the school, to expedite progress, and to avoid mistakes. Those who served with him upon the committee of management of the hospital will not forget his weighty influence, and especially during the critical times when it was decided to rebuild and to enter upon many new fields of work. The esteem in which all held his services was marked by his appointment as a vice-president of the hospital. The Odontological Society of Great Britain made further claims upon his time; he held every office in succession, and in 1895 was elected President and contributed many valuable papers to the society's Transactions.

His father, the late Mr. Robert Hepburn, who had done yeoman service in the founding of the Dental Hospital and consolidating the dental profession, had been also the founder of many of the best Scottish charities supported by Scots resident in London, and these charities claimed and received from David Hepburn support and guidance. He was for many years a managing governor of the Royal Scottish Corporation, a leading and popular member of the Highland Society and an ever-active friend and adviser of the Royal Caledonian Schools. In 1906 he was elected for the third time President of the Caledonian Society. One of his published works was a volume entitled "The Chronicles of the Caledonian Society of London." For many years a Fellow of the Royal Geographical Society, he contributed to its collection photographs and sketches of that little-known corner of the world the Färöe Islands. Mr. Hepburn wrote much and well on both professional and general subjects and his writings possessed the same racy charm which characterised his oratory. Those who knew David Hepburn can alone properly appreciate his worth—how many-sided were his talents, how tender and loving his nature, and how upright his principles.

EDMUND COCKEY, M.R.C.S. ENG., L.S.A.

Mr. Edmund Cockey died at his residence, Frome, Somerset, in his ninetieth year on Jan. 27th. The deceased, who was a member of one of the oldest and most respected of Frome families, received his medical education at St. Bartholomew's Hospital, taking the "College" and "Hall" qualifications in 1842. Mr. Cockey, who had retired for some years from the active work of his profession, had been for nearly 60 years in practice at Frome, and for 55½ years had held the post of medical officer at the workhouse, being appointed in October, 1843, and resigning in May, 1899. Mr. Cockey was much esteemed at Frome and he will be greatly missed there.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Wilhelm Grempler of Breslau, whose anthropological and ethnological researches have made him famous. He was 81 years of age.—Dr. Frank E. Beckwith, professor of midwifery and gynæcology in Yale University.—Dr. J. Garat, formerly medical officer of the Bordeaux hospitals.—Dr. João Ferraz de Macedo, professor of clinical medicine in the Lisbon Medical School.—Dr. Borlée, formerly a professor in the medical faculty of the University of Liège.—Dr. Hayoit de Termicourt, professor of forensic medicine in the University of Louvain.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—The Comitia of the Royal College of Physicians on Jan. 31st conferred Licences to practise upon 83 gentlemen who had completed the Final Examination of the Examining Board in England in Medicine, Surgery, and Midwifery, and the Council of the Royal College of Surgeons conferred the Diploma of Member upon the same gentlemen on Feb. 7th:—

Richard Clayton Allen, Birmingham University; Godfrey Frederick Ely Allison, Manchester University and Guy's Hospital; Arthur Keith Armstrong, St. Bartholomew's Hospital; Charles James Armstrong-Dash, St. Bartholomew's Hospital; Frederick John Ayre, L.S.A., St. Mary's Hospital; Francis James Ball, C.M. Trinity University, Toronto, University College and Middlesex Hospitals; Jehangir Cawasjee Balsara, L.M. & S. Bombay, L.R.C.P. & S. Edin., Bombay University; Ernest Charles Page Barnes, London Hospital; Ernest Cuthbert Barnett, New Zealand and Middlesex Hospital; Howard Barclay Billups, M.A. Oxon., Oxford University and St. Thomas's Hospital; Walter Rowley Bristow, St. Thomas's Hospital; Gerald Tyler Burke, St. Bartholomew's Hospital; Frank Butler, L.D.S., Charing Cross Hospital; Sydney Carter, St. Thomas's Hospital; Clifford Pendrill Charles, St. Bartholomew's Hospital; Thomas Charles Albert Cleverton, London Hospital; Arthur Beauchamp Coomber, St. George's Hospital; Arthur Fitzwilliam Comyn, B.A. Cantab., Cambridge University, and King's College Hospital;

Harry Barrett Corry, B.A. Cantab., Cambridge University, and London Hospital; Kaikhosru Kersaspji Dadachanji, Bombay University and Middlesex Hospital; Kenelm Hutchinson Digby, Guy's Hospital; Albert Edward Evans, University College Hospital; Arthur Charles Douglas Firth, M.A. Cantab., Cambridge University and St. Thomas's Hospital; Harold Edwards Flint, St. Bartholomew's Hospital; Philip Julius Franklin, California, Heidelberg, and King's College Hospital; Howard Græme Gibson, Guy's Hospital; Robert Gray Gillies, L.D.S., Middlesex Hospital; John Herbert Gurley, St. Bartholomew's Hospital; Frank Norman Spurrell Hitchcock, St. Thomas's Hospital; Hugh George Hobson, Middlesex Hospital; William Hammond Hodgson, B.A. Cantab., Cambridge University and London Hospital; Charles Reginald Hoskyn, St. Bartholomew's Hospital; Alfred John Hopkinson Iles, St. Thomas's Hospital; John Pratt Johnson, London Hospital; Charles Edward Mellersh Jones, B.A. Cantab., Cambridge University and Guy's Hospital; John Ellington Jones, L.S.A., St. Bartholomew's Hospital and University College, Bristol; Thomas Alfred Kilby, St. Bartholomew's Hospital; Ralph de Veil King, St. Mary's Hospital; Henry Andrew Lash, St. Mary's Hospital; Charles James Loosely, University College Hospital; Thomas Fletcher Lumb, Cambridge University and Middlesex Hospital; Francis Edmund McKenty, M.D., C.M. McGill, McGill University; Louis Hope Lovat Mackenzie, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Walter Campbell McMurtry, M.D. McGill, McGill University, University College and London Hospitals; Dudley Cyril Master, B.A. Cantab., Cambridge University and Middlesex Hospital; David Assur Henry Moses, St. Bartholomew's Hospital; William Poole Henley Munden, Guy's Hospital; Richard Dominic O'Connor, St. Bartholomew's Hospital; Oscar Phillips Napier Pearn, Westminster Hospital; Frederic Eustace Leigh Phillips, London Hospital; John Edward Prentis, Guy's Hospital; Henry Mallock Prins, University College Hospital; Cuthbert Taunton Raikes, B.A. Oxon., Oxford University and St. Bartholomew's Hospital; George Lancaster Ranking, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Russell John Reynolds, Guy's Hospital; John Sydney Rowlands, M.B., B.Ch. Liverp., Liverpool University; Henry Charles Samuel, University College Hospital; Gerald Noel Boyd Sebastian, St. George's Hospital; Sidney Slade, Middlesex Hospital; James Thornton Smalley, Guy's Hospital; Charles Speers, St. Mary's Hospital; Francis Edgar Sprawson, L.D.S., Charing Cross Hospital; William Russell Square, St. Bartholomew's Hospital; Thomas Gordon Starkey Smith, St. Thomas's Hospital; Robert West Stephenson, Liverpool University and King's College Hospital; Reginald Woolsey Stocks, St. Thomas's Hospital; William Hubert Reitz Sutton, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Herbert Hampden Taylor, B.A. Cantab., Cambridge University and St. Mary's Hospital; Charles Henry Burton Thompson, Middlesex Hospital; Claud Buchanan Ticehurst, B.A. Cantab., Cambridge University and Guy's Hospital; William Fentham Todd, London Hospital; St. John Alexander Molesworth Tolhurst, B.S. Lond., Guy's Hospital; George Stiebel Totesau, University College Hospital; Frederick Thomas Turner, King's College Hospital; Frank Ferdinand Aplin Ulrich, M.B., B.Ch. New Zealand, University of New Zealand; James Arthur Venning, B.A. Cantab., Cambridge University and St. George's Hospital; Behdjet Wahby, Cambridge University and St. George's Hospital; Harry Wales, Leeds University; Thomas Newlands Watt, New Zealand University and Middlesex Hospital; Stephen Harold West, M.B., Ch.B. Vict., Manchester University; Hugh Owen Williams, St. Bartholomew's Hospital; William Humphrey Williams, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; and John Winder, L.S.A., St. Mary's Hospital.

Diplomas in Public Health have been granted to the following gentlemen:—

Alexander Gray Banks, M.D., Ch.B. Glasg., Glasgow University and King's College; Harold Graves Bennetts, M.B., C.M. Sydney, Sydney University and King's College; Woodley Daniel Betenson, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Breadalbane Blacklock, M.B., Ch.B. Edin., Edinburgh University and St. George's Hospital; Robert Bruce Ferguson, M.D., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University, St. Mary's and University College Hospitals; James Henry Hugo, D.S.O., Captain I.M.S., M.B., B.S. Lond., L.R.C.P., M.R.C.S., St. Bartholomew's and University College Hospitals; Sydney Price James, Captain I.M.S., M.D. Lond., L.R.C.P., M.R.C.S., St. Mary's and University College Hospitals; Alfred Ernest Conquer Keble, Major R.A.M.C., L.R.C.P. & S. Irel., Dublin University and Royal Army Medical College; Percy John Probyn, D.S.O., Captain R.A.M.C., M.B., B.S. Lond., L.R.C.P., M.R.C.S., Charing Cross Hospital and Royal Army Medical College; Oliver Long Robinson, Major R.A.M.C., L.R.C.P., M.R.C.S., Dublin University and Royal Army Medical College; Alfred George Patrick Thomson, M.B., C.M. Edin., Edinburgh University and Manchester University; and Arthur Lisle Ambrose Webb, Captain R.A.M.C., L.R.C.P., M.R.C.S., Royal Army Medical College and University College Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Fritz Egger, Extraordinary Professor of Medicine, and Dr. Gustav Wolff, Extraordinary Professor of Psychiatry, have been promoted to be Ordinary Professors. Dr. Ernest Hedinger of Berne has been appointed Extraordinary Professor of Pathological Anatomy in place of Dr. Kaufmann who is migrating to Göttingen.—*Berlin:* Dr. Paul Richter, *privat-docent* of Medicine, has been granted the title of Professor.—*Brussels:* Dr. Keiffer has been appointed Extraordinary Professor of Midwifery.—*Clausenburg:* Dr. B. Reinhold has been recognised as *privat-docent* of Medical Chemistry.—*Erlangen:* Dr. D. Gerhardt of Jena has been appointed Professor of Internal Medicine and Pharmacology in succession to Dr. Voit.—*Halle:* Dr. Berthold Pfeiffer has been recognised as *privat-docent* of Neurology and Psychiatry and Dr. E. J. Lesser as *privat-docent* of Physiology.—*Heidelberg:* Dr. E. Feer of Basle has been appointed Extraordinary Professor of Children's Diseases in succession to the late Dr. Vierordt.—*Kiel:* The title of Professor has been granted to Dr. Julius Häcke, *privat-docent* of Mental Diseases.—*Leipsic:* Dr. Stadler has been recognised as *privat-docent* of Medicine.—*Lemberg:* The title of Extraordinary Professor has been granted to Dr. W. Bylicki and to Dr. F. Kosminski, *privat-docenten* of Midwifery and Gynæcology, and to Dr. G. Bikeles, *privat-docent* of Neurology. *Lausanne:* Dr. Larguier has been appointed Extraordinary Professor of Psychology and Dr. Arthus Professor of Physiology.—*Munich:* Dr. J. A. Arnann has been appointed Extraordinary Professor of Gynæcology.—*Naples:* Dr. G. Cicconardi has been recognised as *privat-docent* of Symptomatology and Dr. Th. Morisani as *privat-docent* of Midwifery and Gynæcology.—*Rio de Janeiro:* Dr. A. A. de Azevedo Sodré has been appointed Professor of Clinical Medicine in succession to the late Dr. Benicio de Abreu, and Dr. Pedro de Almeida Magalhães has been appointed to the chair of Medical Pathology.—*Rome:* Dr. F. Fichera has been recognised as *privat-docent* of General Pathology.—*Strasburg:* Dr. F. Moritz of Giessen has been appointed Extraordinary Professor of Clinical Medicine in succession to Dr. von Krehl.—*Utrecht:* Dr. H. J. Larnéris has been appointed Extraordinary Professor of Surgery in succession to Dr. Narath.—*Zürich:* Dr. Hottinger has been recognised as *privat-docent* of Urology and Diseases of the Kidneys.

INCORPORATED INSTITUTE OF HYGIENE. — A lecture of a popular nature dealing with infant feeding was delivered by Dr. Robert Hutchison at this institute on Feb. 6th and was well attended. The lecturer compared the results of natural and artificial feeding of infants and drew attention to some features of the management of natural feeding which should be carried out with due care. Regularity of feeding and the need of weighing the infant at intervals were points upon which stress was laid. Dr. Hutchison insisted that weaning an infant should not be postponed to the extent that it often was; infants, he said, should be weaned at the age of ten months, irrespectively of the condition of their teeth. Unfortunately at the present time there were so many mothers who were unable to nourish their offspring, as many perhaps who believed that they were unable to do so, and a very large army of mothers who frankly declined to feed their children at the breast. Much as this situation was to be deplored it must be faced, and the best means of artificial feeding must be utilised. As regards artificial feeding Dr. Hutchison showed the importance of proceeding upon a definite plan and of avoiding frequent changes. Cow's milk was naturally the first form of artificial food for infants, of which the advantages and disadvantages were discussed. Few very young children were able to digest and to thrive upon undiluted cow's milk, and therefore the various methods of modifying cow's milk, condensed milk, desiccated, peptonised milk and patent foods were made the subjects of brief comments. The "half-and-half" mixture was referred to and Dr. Hutchison expressed the opinion that on the whole plain water in the above proportions was the most satisfactory diluent of milk to render it a palatable, nourishing, and easily digested food for infants. Sometimes the addition to this mixture of small but definite and equal quantities of cream and sugar were indicated. There were, however, many infants who found this degree of solution too strong. For such as these Dr. Hutchison would recommend the addition of citrate of soda in the proportion of one grain of citrate of soda to an ounce of milk. This addition should considerably lessen the density of the milk clot and in a large number of instances would achieve the desired object. With some infants citrated milk was of little value as a food and in certain cases Dr. Hutchison advised the employment of condensed milk for this purpose. In doing so he admitted that he was running counter to the views of the majority of the medical profession but he did not speak in favour of the indiscriminate use of condensed milk or of the employment of unsuitable kinds of condensed milk. Theoretically, unsweetened condensed milk was the best but he had found in practice that sweetened condensed milk was a more suitable and nourishing infant's food. When properly modified it resembled in composition human milk more nearly than did the "half-and-half" mixture and did not form clots. Condensed milk should not be used for too long a period,

as, if so, rickets might be produced. After an infant had arrived at the age of four months condensed milk should be given as a food no longer. If an infant had a puny appearance condensed milk would be more likely to suit than the "half-and-half" mixture. If neither "half-and-half" mixture, citrated milk, nor condensed milk seemed to act as satisfactory nourishing agents desiccated milk might be tried. There were cases in which, as a last resort, peptonised milk would be of avail. In regard to the amount of food to be given to infants at one time, Dr. Hutchison said that no hard-and-fast rule could be laid down. As with adults, so with infants, appetites varied, and therefore the personal factor must be taken into account. A simple feeding-bottle was recommended and emphasis was laid on the point that it should have a good-sized hole at the top, so that the fluid could be sucked through without difficulty. Dr. Hutchison declared himself to be by no means in favour of patent foods, as he thought that few children who could not digest modified milk would thrive. Weaning from the bottle should take place at the age of ten months, as weaning from the breast.

UNIVERSITY OF OXFORD.—William Osler, D.M., Hon. D.Sc., F.R.S., student of Christ Church, Regius Professor of Medicine, has been elected a delegate of the Common University Fund.—The following have been elected or re-elected members of the Board of the Faculty of Medicine: Sir William S. Church, Bart., D.M., Christ Church; S. H. West, D.M., Christ Church; E. W. A. Walker, D.M., Fellow of University College; H. M. Vernon, D.M., Fellow of Magdalen College; W. Ramsden, D.M., Fellow of Pembroke College; W. Williams, D.M., D.P.H., Jesus College; W. Bruce Clarke, B.M., Pembroke College; and W. W. Fisher, M.A., Corpus Christi College.—The following have been elected or re-elected members of the Board of the Faculty of Natural Science:—C. Lendesdorf, M.A., Fellow of Pembroke College; A. Thomson, M.A., Exeter College, Professor of Human Anatomy; H. M. Vernon, D.M., Fellow of Magdalen College; W. W. Fisher, M.A., Corpus Christi College; D. H. Nagel, M.A., Fellow of Trinity College; J. Walker, M.A., Christ Church; C. E. Haselfoot, M.A., Fellow of Hertford College; N. V. Sidgwick, M.A., Fellow of Lincoln College; P. T. Kirby, M.A., Fellow of New College; E. S. Goodrich, M.A., Fellow of Merton College; W. Ramsden, D.M., Fellow of Pembroke College; and H. B. Hartley, M.A., Fellow of Balliol College.

PUBLIC HEALTH IN THE STRAITS SETTLEMENTS.—The annual report of the medical department of the Straits Settlements is issued as an official publication of 100 large pages. In the introductory general section Mr. D. K. McDowell, C.M.G., the principal civil medical officer, states that the death-rate for the whole colony was 40·51 per 1000 in 1905 as compared with 38·98 per 1000 in 1904, whilst the corresponding birth-rates were 47·68 in 1905 and 34·97 in 1904. The colony consists of five settlements, the total estimated mean population being 603,824. During the year there were 25 cases of plague, with 24 deaths; 22 cases of cholera, with 19 deaths; and 128 cases of small-pox, with 35 deaths. Of beri-beri, 1958 cases were admitted into the different hospitals in the colony with 575 deaths in 1905. The total number of deaths registered from this disease in 1905, 1904, and 1903 respectively were 1888, 2287, and 1729. From November, 1904, all the prisoners in Singapore and from the middle of 1905 all the patients in hospitals in the several settlements and the prisoners in Penang and Malacca were fed on parboiled rice, and reports from all quarters spoke well of the change in so far as the death-rate had gone down. There were, however, no trustworthy data on which to form a decided opinion as to parboiled rice being either prophylactic or curative. A medical school for Asiatic students has been established in Singapore under the name of the Straits and Federated Malay States Government Medical School, Dr. Gerald D. Freer being the principal and also conducting the anatomy class. The Medical Registration Ordinance, which deals with the registration of qualified medical practitioners and prohibits practice by unqualified men, was brought into force on July 1st and by the end of December 59 practitioners were registered. Singapore, with an estimated population of 250,300, is the most important of the five settlements. In 1905 there were 5726 births and 11,122 deaths registered. In the General Hospital, Tan Tock Seng's Hospital, the prison hospitals, the quarantine camp, the leper asylum, and the lunatic asylum there were 11,985 admissions with 1884 deaths. The maximum and minimum shade temperatures were respectively 91·2° F. in March and 72·3° in February. The total rainfall was 82·69 inches.

LONGEVITY.—Mrs. P. Copner of King Stanley, near Stroud, Gloucestershire, celebrated the 101st anniversary of her birth on Feb. 4th.

ROYAL UNITED HOSPITAL, BATH.—Mr. H. O. Wills of Kelston Knoll has offered to give £1000 to the fund being raised by the Mayor of Bath to pay off the debt of £6000 which exists on the Royal United Hospital, provided that £5000 are obtained by Nov. 8th next.

DONATIONS AND BEQUESTS.—Under the will of Mrs. Emily de Gorloff the Brompton Cancer Hospital and the General Hospital, Tunbridge Wells, will each receive £1000.—By the will of Mr. Edwin Clephan, the Leicester Children's Hospital will receive £500.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—The annual dinner of the past and present students of the University of Durham College of Medicine will be held in the library of the College on Feb. 22nd, at 7.15 P.M. Dr. George R. Murray will occupy the chair and tickets, price 10*s.* 6*d.*, may be obtained on application to the honorary secretary, Dinner Committee, College of Medicine, Newcastle-on-Tyne.

A SENSIBLE DECISION.—At a meeting held recently the Leicester board of guardians, by 26 votes to 2, acceded to the request of Dr. A. Thomson, professor of human anatomy, University of Oxford, that the bodies of unclaimed paupers should be handed over to the University authorities for the purposes of anatomical examination. Professor Thomson, who attended the meeting of the guardians, explained that they only asked for the bodies of those who died absolutely without relatives and were practically unknown. It was a popular fallacy that the request involved doing away with Christian burial; it was merely deferred burial. After a body had been examined anatomically it was committed to earth with full religious rites. Dr. D. MacAlister, President of the General Medical Council, also addressed the board. The question was whether they should use the bodies of those who had no relatives to have their feelings hurt to benefit the living. Newcastle, Liverpool, Manchester, Leeds, Sheffield, Bristol, Cardiff, and other towns were already serving the profession in this direction.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—Dr. Leonard P. Mark, President of the society, took the chair on Feb. 6th at the twenty-fifth anniversary dinner, a well-attended gathering, which took place at the Wharncliffe Rooms, Hotel Great Central. Dr. A. E. Russell, in proposing the toast of "The Imperial Forces," after making a few remarks on the navy, pointed out that what impressed him most as an ordinary citizen was the extraordinary flexibility and adaptability of the British army and he proceeded to give examples of this view from incidents in the many wars carried on by Great Britain in all parts of the world and in every variety of climate. This toast was replied to by Sir Alfred Keogh, the Director-General of the Army Medical Service, who said that the medical profession must bear in mind that it was a matter of common knowledge that in case of a big war the Army Medical Service could only make provision for a small army and that the country would have to look to the lay members of the medical profession to make up the deficiency. He warned them that it was quite erroneous to consider that the treatment of the wounded in time of war was the heaviest part of the work of the Army Medical Service and he particularly emphasised the need for medical men in time of peace making themselves acquainted with the other duties of military medicine and hygiene. He praised the work undertaken by the members of the West London Post-Graduate College and showed how necessary it was that others should follow their example and receive special instruction on those matters. He was sure the medical profession would not be found wanting in patriotism when the time came for providing the organisation necessary for securing adequate help in the hour of need. The chairman then submitted the toast of "The Society" and announced that it was in a most prosperous condition. After this Dr. W. Culver James proposed the toast of "The Kindred Societies and Guests,"

which was acknowledged by Mr. J. Warrington Haward and Mr. E. B. Turner. The evening was concluded by Mr. Rickard W. Lloyd giving the toast of "The Chairman," to which Dr. Mark duly replied.

BRISTOL ROYAL INFIRMARY.—At the annual meeting of the governors of the Bristol Royal Infirmary held on Feb. 5th the President (Sir G. White) thanked the citizens for completing the special fund of £50,000, of which £15,000 will be devoted to paying off the debt on the institution, leaving £35,000 to be spent on bringing the building thoroughly up to modern requirements. The medical report stated that during 1906 there were 4029 in-patients admitted against 3762 in 1905, and that 45 508 out patients were treated compared with 42,615 in the previous year. The financial statement showed that the total income amounted to £16,630. The total ordinary expenditure was £15,487 and the additional expenditure in alterations amounted to £2118, thus bringing up the total outlay to £17,605, which left at the end of the year a balance of £975 due to the treasurer.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next quarterly meeting of this association will take place, by the courtesy of Dr. A. M. Jackson, at the Notts County Asylum, Radcliffe-on-Trent, at 3 o'clock, on Friday, Feb. 22nd next, under the presidency of Dr. Robert Jones. The asylum is seven miles from Nottingham. The nearest station is Radcliffe, two miles distant, while Bingham Station (G.N.R.) is distant three miles. The educational committee will meet at the asylum at 10 A.M., the Parliamentary committee at 11.30 A.M., and the council at noon. Dr. Jackson has invited the members to luncheon at the asylum at 1.30 P.M. At 7 P.M. the members will dine together at the George Hotel, Nottingham, where on the previous afternoon the subcommittees upon the Nursing Handbook and the nursing examination will meet. Further particulars can be obtained from the honorary general secretary, Dr. C. Hubert Bond, 11, Chandos-street, Cavendish-square, London, W.

THE AFTER-CARE ASSOCIATION.—At the annual meeting of this association held at the Apothecaries' Hall, London, under the presidency of Mr. E. Parker Young, Dr. Robert Jones touched on a point of very great importance not only with regard to the welfare of the patients themselves but also to the pocket of the ratepayer. "There are quite a number of patients in the asylums today," he said, "whom we could discharge if we could get more help of the kind which this association gives. If there was some association or body to take charge of them they would no longer be chargeable to the public purse." During the past year 308 applications were received by the association from 184 women and 124 men, but many more cases could have been assisted if the funds at the disposal of the association had been greater. We have often testified to the valuable nature of the work done by the association upon very slight support, and we bring the address of the secretary before our readers' notice with pleasure. All communications should be addressed to Mr. Thornhill Roxley, Church House, Westminster.

INFANTILE MORTALITY AND ITS PREVENTION.—On Feb. 11th a special meeting of the council of the Charity Organisation Society was held at Denison House, Vauxhall Bridge-road, for the purpose of discussing the question of "Health Visiting in Relation to Infant Mortality." Sir Edward Brabrook, C.B., presided. Mr. G. Millson, medical officer of health of Southwark, said that London was behind some other great cities with regard to visiting the poor to educate them in the subject of the rearing of infants. The movement was, however, rapidly extending, and there was every prospect that before long there would be a vast army of voluntary health workers in London. In the early days of a health society attention might be given almost exclusively to caring for mothers and to advising as to the treatment of prospective babies. Tact and care in visiting were essential. Health visitors should impress on mothers the necessity of suckling and give instruction as to the care and feeding of children months before the children were born. Milk depôts under present conditions were almost a necessity during the autumn months, when infantile diarrhœa should be notified. Dr. J. F. J. Sykes, medical officer of health of St. Pancras, said that infantile mortality was actually increasing. Domestic and personal hygiene was, however, advancing with beneficial results, and as it advanced and as it was taken up more and more by public bodies so the effect would be greater. The subject, too, was being taught to an increasing extent in the schools. But maternal hygiene could only be taught to mothers by women. It was very valuable, therefore, to have as health visitors women with a special understanding of maternal hygiene. The mortality among infants who had been hand-fed was enormously greater than among those who had been fed naturally by their mothers. Dr. Robert Hutchison said that, broadly speaking, the causes of infantile mortality were poverty in the home, negligence of the parents, or ignorance on the part of the mother. Poverty was the chief among these. He had been horrified to find how many mothers were unable to buy cows' milk for their children or food for themselves. He agreed that they should advocate the natural method of feeding, but it often happened that working-class women were compelled to resort to artificial feeding merely from inability to feed their children naturally. He had again and again advised mothers to wean their children because owing to the conditions in which the mothers lived the children were not doing well on the natural method of feeding. Poverty was part of the social problem and as the condition of the working classes improved infantile mortality would decrease. Sir Edward Brabrook also agreed that the principal factor in the cause of infantile mortality was poverty.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held on Jan. 31st at Caxton House, Westminster, Dr. F. H. Champneys being in the chair. A letter was read from the Assistant Under Secretary for Ireland inquiring on behalf of the Lord Lieutenant whether there would be any objection on the part of the Board to steps being taken to amend the Midwives Act, 1902, so as to enable the Board to hold examinations in Ireland. The Board decided to reply that it realises the difficulties of an extension of the Midwives Act, 1902, to Ireland but would look with favour on a new Act for Ireland framed on the lines of the present Act. The secretary was instructed by the Board to give notice to the local supervising authority of any application for the restoration of a name to the Roll. The Board decided that the Privy Council should be asked whether the Board has power under the Midwives Act to frame a rule providing for the removal from the Roll of the name of a woman wishing to retire. A letter was read from Dr. Sidney Barwise, county medical officer of Derbyshire, submitting for the approval of the Board a scheme for the establishment of a training centre for midwives at Chesterfield. The Board decided that the scheme should be approved in principle. A letter was read from a certified midwife as to the circumstances in which she obtained the certificate of the Board under Section 2 of the Midwives Act. The Board directed that the medical practitioner who certified that the applicant had been in *bonâ fide* practice as a midwife since January, 1901, should be asked for an explanation of the circumstances in which he signed the certificate. The charge alleged against the midwife A. L. Bellis by the local supervising authority for Southampton was considered and the Board decided that she should be severely censured on her own admission of having made a false declaration of a stillbirth.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, 41 and 43, Maddox-street, Bond-street, London, W.

The Next Street But One. By M. Loane, Author of "The Queen's Poor." Price 6s.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London, W.C.

Aids to Dental Surgery. By Arthur S. Underwood, M.R.C.S., L.D.S. Eng., and Douglas Gabell, M.R.C.S., L.R.C.P. Lond., L.D.S. Eng. Second edition. Price 2s. 6d.

Aids to the Diagnosis and Treatment of Diseases of Children. By John McCaw, M.D. R.U.I., L.R.C.P. Edin., Physician to the Belfast Hospital for Sick Children. Third edition. Price, cloth, 4s. 6d.; paper, 4s.

Cancer: its Treatment by Modern Methods. Being the Bradshaw Lecture for 1906, which was delivered before the Royal College of Surgeons of England on Dec. 12th, 1906. By Edmund Owen, Hon. LL.D. Aberdeen, Senior Vice President of the College; Consulting Surgeon to St. Mary's Hospital; Senior Surgeon to the French Hospital, London. Price 1s. net.

Lessons on Massage. By Margaret D. Palmer, formerly Masseuse and Manager of the Massage Department of the London Hospital. Third edition. Price 7s. 6d. net

Surgery of the Rectum. By Fred. C. Wallis, B.A., M.D., B.C. Cantab., F.R.C.S., Surgeon to Charing Cross Hospital, St. Mark's Hospital, and the Grosvenor Hospital for Women and Children. Price, cloth, 2s. 6d.; paper, 2s.

War with Disease. By Frederick F. MacCabe, M.B. Univ. Dubl., Medical Officer, South of Ireland Imperial Yeomanry; late Civil Surgeon, H.M. Field Force, South Africa. Second edition. Price 1s. net.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

The Refraction of the Eye A Manual for Students. By Gustavus Hartridge, F.R.C.S., Senior Surgeon to the Royal Westminster Ophthalmic Hospital; Ophthalmic Surgeon and Lecturer on Ophthalmic Surgery to the Westminster Hospital. Fourteenth edition. Price 5s. net.

F. A. DAVIS COMPANY, Philadelphia:

Conservative Gynecology and Electro Therapeutics. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Betton Massey, M.D., Attending Surgeon to the American Oncologic Hospital, Philadelphia, Fellow and Ex-President of the American Electro-Therapeutic Association. Fifth revised edition. Price not stated.

FORT ORANGE PRESS, BRANDOW PRINTING COMPANY, Albany, N.Y.

Studies from the Bender Hygienic Laboratory, Albany, N.Y. Reprints. Volume III. 1906. Price not stated.

HEALTH RESORTS BUREAU, 27, Chancery-lane, London, W.C.

French Law and Customs for the Anglo-Saxon. A Guide for Every-day Use. By Arthur S. Browne Solicitor of the Supreme Court. Second edition, revised and enlarged. Price 2s. 6d. net.

J. B. LIPPINCOTT COMPANY, Philadelphia and London.

International Clinics. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U.S.A., with Collaboration. Volume IV. Sixteenth Series, 1906. Price not stated.

JOHN BALE, SONS, AND DANIELSSON, Limited, 83-91, Great Titchfield street, London, W.

The Past, Present, and Future of the School for Advanced Medical Studies of University College, London. Being the Introductory Address at the Opening of the Winter Session, October, 1906. By Rickman John Godlee, Holme Professor of Clinical Surgery; Surgeon in Ordinary to H.M. the King. January, 1907. Price 2s. 6d. net.

KIMPTON, HENRY, 13, Furnival-street, Holborn, London, E.C.

Kimpton's Pocket Medical Dictionary. For Practitioners, Students, and Nurses. By Thomas Dutton, M.D. Univ. Durh. Price 3s. 6d. net.

LEWIS, H. K., 136, Gower-street, London, W.C.

Anæsthetics: their Uses and Administration. By Dudley Wilmot Buxton, M.D., B.S., M.R.C.P., sometime President of the Society of Anæsthetists; Member of University College; Administrator of Anæsthetics and Lecturer in University College Hospital. Fourth edition. Price 7s. 6d.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, London, E.C.

Polytechnic Cookery Book. By M. M. Mitchell, M.C.A. Price 2s.

The Essentials of Histology, Descriptive and Practical. For the Use of Students. By E. A. Schäfer, LL.D., Sc.D., F.R.S., Professor of Physiology in the University of Edinburgh. Seventh edition. Price 10s. 6d. net.

The Health of our Children in the Colonies. A Book for Mothers. By Dr. Lilian Austin Robinson. Second edition, revised and enlarged. Price 2s. 6d. net.

METHUEN AND CO., 36, Essex-street, Strand, London, W.C.

The Control of a Scourge; or, How Cancer is Curable. By Charles P. Childe, B.A., F.R.C.S., Surgeon, Royal Portsmouth Hospital. Price 7s. 6d. net.

MORING, ALEXANDER, LIMITED, THE DE LA MORE PRESS, 32, George-street, Hanover-square, London, W.

A Second German Course for Science Students. Readings from Recent German Scientific Publications. Selected, arranged, and annotated by H. G. Fiedler, Professor of German at the University of Birmingham, and F. E. Sandbach, Lecturer in German at the University of Birmingham. Price 2s. 6d. net.

OFFICES OF "THE MUNICIPAL JOURNAL," EDWARD LLOYD, LIMITED, Salisbury-square, London.

The Municipal Year-book of the United Kingdom for 1907. Edited by Robert Donald, Editor of "The Municipal Journal" and "The London Manual." Price 3s. 6d. net.

PENNOCK, EDWARD, 3809, Woodland Avenue, Philadelphia, U.S.A.

Tumours of the Cerebrum, their Focal Diagnosis and Surgical Treatment. By Charles K. Mills, M.D., Charles H. Frazier, M.D., William G. Spiller, M.D., George E. De Schweinitz, M.D., and Theodore H. Weisenburg, M.D. Price not stated.

PENTLAND, YOUNG J., Edinburgh and London.

The Diagnosis and Treatment of Intussusception. By Charles P. B. Clubbe, Hon. Surgeon to the Royal Prince Alfred Hospital; Hon. Surgeon to the Royal Alexandra Hospital for Children, Sydney; Joint Lecturer in Clinical Surgery at the Sydney University. Price not stated.

ROGERS, S. EDGECUMBE, 27A, Farringdon-street, London, E.C.

Departmental Decisions by the Local Government Board, Board of Education, Home Office, and Treasury. Quarterly issue. No. 5. December, 1906. Price 2s.

SANITARY PUBLISHING CO., LIMITED, London. (JOHN WILEY AND SONS, New York.)

Sewage and the Bacterial Purification of Sewage. By Samuel Rideal, D.Sc. Lond., Fellow of University College, London, Fellow of the Institute of Chemistry, of the Chemical Society, and of the Royal Sanitary Institute of Great Britain. Third edition. Price 15s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BLACK, D. D., L.R.C.P. & S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the East Linton District of the county of Haddington.

BROWN, W. H., F.R.C.S. Irel., has been appointed Consulting Surgeon to the General Infirmary, Leeds.

CARNELL, EDWARD, M.R.C.S., L.R.C.P. Irel., D.P.H. Irel., L.S.A., has been appointed Medical Superintendent of the Newton Abbot (Devon) Joint Hospital District.

COLBY, J. G. B., M.B., B.S. Oxon., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Malton District of the county of York.

COLLINSON, HAROLD, F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon in Charge of the Patients at the Ida and Robert Arthington Semi-Convalescent Hospitals of the Leeds General Infirmary.

DOBSON, J. F., M.S. Lond., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the General Infirmary, Leeds.

FORSYTH, R., M.D. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Birstal District of the county of York.

GUBB, FLORENCE EDITH, M.B., B.S. Lond., L.S.A., has been appointed House Surgeon at the Children's Hospital (East-End Branch), Sheffield.

HORSFORD, CYRIL, M.D. Edin., has been appointed Laryngologist and Aural Surgeon to the London College of Music, Great Marlborough-street, W.

HUGHES, CECIL, M.B., B.S. Lond., has been appointed Honorary Anæsthetist at Paddington Green Children's Hospital.

LANGMEAD, FREDERICK, M.D. Lond., M.R.C.P. Lond., has been appointed Physician to Out-patients at Paddington Green Children's Hospital.

LEACH, J. C., M.D. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Sturminster Newton District of the county of Dorset.

LORD, JOHN R., M.B. Edin., has been appointed Medical Superintendent, London County Asylum, Horton, Epsom.

MACNAMARA, E. D., M.B., B.Ch. Cantab., has been appointed Physician to Out-patients at Paddington Green Children's Hospital.

MORTON, EDWARD J., M.B. Edin., F.R.C.S. Edin., has been appointed Casualty Officer at the Belgrave Hospital for Children, London, S.W.

OGG, THEODORE A. W., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Parish of Rothes, Morayshire.

PEGLER, L. HEMINGTON, M.D. Edin., has been appointed Laryngologist and Aural Surgeon to the London College of Music, Great Marlborough-street, W.

PETERS, E. A., F.R.C.S. Eng., M.D. Cantab., has been appointed Surgeon to the Throat and Ear Department at Paddington Green Children's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £30 per annum, with board, washing, and lodging.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN.—House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and attendance.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Assistant Pathologist. Salary £30 a year, with board and lodging. Also Honorary Assistant Surgeon.

BRISTOL ROYAL INFIRMARY.—Resident Junior House Surgeon and Resident Casualty Officer, both for six months. Salaries at rate of £50 per annum, with board, lodging, and washing.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80, with board and residence.

CARDIFF INFIRMARY (GENERAL HOSPITAL).—House Physician for six months, renewable. Salary at rate of £60 per annum, with board, washing, and apartments.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Registrar for In-patients. Salary 20 guineas a year.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Honorarium of £25, with board, residence, laundry, &c. Also Medical Officer for the Casualty Department for six months, renewable. Salary at rate of £100 per annum, with luncheon.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon, unmarried. Salary £70 per annum, with board and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House Physician. Salary £80, with board, residence, and washing.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer. Salary £100 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Anæsthetist.

LEICESTER INFIRMARY.—House Surgeon. Salary £100 per annum, with board, apartments, and washing.

LEICESTER, LEICESTERSHIRE AND RUTLAND ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £120, rising to £150, with apartments, board, and washing.

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—Three House Physicians and Three House Surgeons. Salary at rate of £60 per annum, with board and residence.

LONDON COUNTY COUNCIL.—Woman Inspector under the Midwives Act, 1902, unmarried or widow. Salary £175 a year, rising to £300.

LONDON LOCK HOSPITAL.—House Surgeon to the Female Hospital. Salary £100 per annum, with board, lodging, and laundry.

METROPOLITAN ASYLUMS BOARD.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £170, with rations, lodging, attendance, and washing.

MIDDLESEX HOSPITAL, W.—Resident Medical Officer, unmarried. Salary £200, with residence and board.

NEW HOSPITAL FOR WOMEN, Euston-road, N.W.—House Surgeon. Also Second House Surgeon (females).

NEWPORT (MON.) UNION WORKHOUSE.—Resident Medical Officer, unmarried. Salary £250 per annum and fees, with apartments, rations, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon for six months. Salary at rate of £60 per annum, with board, residence, and laundry allowance.

ORKNEY, PARISH OF ROUSAY AND EGILSHAY.—Resident Medical Officer. Salary £51 per annum.

POWICK, NEAR WORCESTER, WORCESTER COUNTY AND CITY ASYLUM.—Third Assistant Medical Officer. Salary £140, rising to £160, with board, lodging, and washing.

ROBBEN ISLAND, CAPE COLONY.—Second Assistant Medical Officer, unmarried. Salary £250 per annum, with quarters and two rations.

ROCHDALE INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Radiographer and Medical Electrician. Salary £100 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL FOR STONE, &c, Henrietta-street, Covent Garden, W.C.—Junior House Surgeon. Salary at rate of £50 a year, with board, lodging, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House Surgeon. Salary £75 per annum, with residence, board, and washing.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon for six months. Salary £31, with board, residence, and laundry.

STIRLING DISTRICT ASYLUM, Larbert.—Two Assistants (female) for Clinical Research Work. Board, residence, and laundry.

WAKEFIELD, WEST RIDING ASYLUM.—Assistant Medical Officer. Salary £150, rising to £180, with apartments, board, washing, and attendance.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon, unmarried. Salary £50 per annum, with board, residence, and washing.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, London, W.—Physician to Out-patients.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Two House Physicians and Three House Surgeons for six months. Board, lodging, and washing.

WESTMINSTER GENERAL DISPENSARY.—Honorary Physician.

WOKINGHAM, BERKS, LONDON OPEN-AIR SANATORIUM, PINEWOOD.—Assistant Resident Medical Officer. Salary £100 per annum and all found.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician. Salary £80 per annum, with board, lodging, and washing.

YORK COUNTY HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Maryport, in the county of Cumberland; and at Buntingford, in the county of Hertford.

Births, Marriages, and Deaths.

BIRTHS.

HARMER.—On Feb. 8th, the wife of Douglas Harmer, M.C., F.R.C.S., of 45, Weymouth-street, W., of a son.

MASON.—On Feb. 9th, at George-street, Portman-square, W., the wife of G. A. Mason, M.A., M.B., B.C. Cantab., of a son.

SCOTT-TURNER.—On Feb. 11th, at Anerley-road, Upper Norwood, the wife of Arthur Scott-Turner, M.R.C.S., L.R.C.P., of a daughter.

VIRET.—On Feb. 10th, at Horton-lane, Bradford, the wife of Benjamin Pope Viret, M.B. Lond., M.R.C.S., L.R.C.P., of a daughter.

WOOLLEY.—On Feb. 9th, at Claremont-road, Surbiton, the wife of Edward John Woolley, M.D., of a daughter.

MARRIAGES.

CASTOR—HANHART.—On Feb. 9th, at St. Saviour's Church, South Hampstead, Lieutenant-Colonel Richard Henderson Castor, I.M.S., to Enid Mary, younger daughter of Nicholas Hanhart, LL.B., L.C.C.

RAMSAY—PACE.—At the Church of St. Margaret's, Westminster, on 9th February, by the Rev. Canon Hensley Henson, D.D., assisted by the Rev. Cornelius Witherby, Andrew Maitland Ramsay, M.D. Glasgow, to Elizabeth Margaret Pace, M.D., daughter of the late Thomas Richard Pace.

DEATH.

COOPER.—On Feb. 6th, at Sutherland Tower, Torquay, James Cooper, M.R.C.S., L.R.C.P., aged 58 years.

N.B.—A fee of 1s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE SCOPE OF THE WORKMEN'S COMPENSATION ACT, 1906.

A CORRESPONDENT writes:—

"I employ sometimes one, sometimes two, domestic servants, one of whom lives out. A charwoman also does work here once a week. An electrician comes when sent for to repair my extensive electro-therapeutic apparatus. A nurse comes when sent for—usually four to six times weekly—to help me with the treatment of patients. A gardener comes fortnightly to keep my garden in order and window cleaners come to clean my windows. Masseuses and a gymnast come to my house to give electro-massage, &c., to my patients. I also employ a lady help to do housework. How many of these are included in the Act? I have no time to study the text of the Act."

Our correspondent raises points which cannot be disposed of even by those who have leisure for the prolonged studying of the text of the Act. The particular clause which deals with the points at issue is that which says:—

"'Workman' does not include any person employed otherwise than by way of manual labour whose remuneration exceeds £250 a year;

"Or a person whose employment is of casual nature, and who is employed otherwise than for the purpose of the employer's trade or business;

"Or a member of the police force;

"Or an out-worker;

"Or a member of the employer's family dwelling in his house;

"But, save as aforesaid, means any person who has entered into or works under a contract of service or apprenticeship with an employer, whether by way of manual labour, clerical work, or otherwise, and whether the contract is expressed or implied, is oral or in writing."

The interpretation of this clause will probably give work for the law courts in the near future, the part of it which relates to employment of a casual nature, for the purpose of the employer's trade or business, being especially indefinite. Probably until the law courts have given decisions no one will be able to say positively what the liability of the employer is—where it begins and where it ends. Our correspondent's domestic servants, of course, come within the scope of the Act, and quite likely the lady help and the charwoman will if he employs them regularly and directly. As the electrician comes only when sent for, and is probably the employee of a business house, he would appear to be "casual," and his risks would be covered in any accident which might happen to him by the firm which employs him. The nurse may come from an institution and would then probably be in the position of the electrician, but, on the other hand, she may be a private nurse, or our correspondent may have a contract with her; hence circumstances will determine if he is responsible for her accidents. The gardener employed once a fortnight would appear to be "casual," especially if he is not directly employed but hired through a market gardener, and the window cleaners may or may not be the same. The masseuses and the gymnast are presumably just as "casual" as the gardener and not under contract.

No one can definitely say what is the scope of the clause in the matter of casual employment and therefore our correspondent, if he wants to be absolutely safe, should have a floating policy with his insurance society to cover the various personages mentioned, at any rate for a year or two, until the clause has been interpreted by the lawyers.

AN UNCOMPLETED QUOTATION.

To the Editors of THE LANCET.

SIRS,—Can any reader kindly give the rest of a verse which begins?—

"The surgeon's like a god whom men adore,
When Death about the sick man's bed doth soar,"

and so on, and finishes—

"So when thy patient ill is, ask the fee,
For if he's well, then patient thou must be."

I am, Sirs, yours faithfully,

Feb. 10th, 1907. A. C.

THE ARGEMONE MEXICANA.

To the Editors of THE LANCET.

SIRS,—In an article on the treatment of the morphia habit Dr. Fromme advises the use of the Argemone Mexicana. May I ask if any of your readers have had any experience of its value in such cases, whether there have been any other contributions to the subject, and if preparations of this plant can be obtained in England? I should be glad also to know what is the anti-opium plant announced in THE LANCET of Feb. 9th, as to be shown at the Pharmaceutical Society and why it is so-called.

I am, Sirs, yours faithfully,

ENQUIRER.

"AUTO-DIAGNOSIS."

To the Editors of THE LANCET.

SIRS,—I do not know if the inclosed would interest your readers. It was presented to me on Christmas Day by an Indian in hospital who had been operated on by my assistant for fissure a day or two previously. The date, spelling, and punctuation are his own. It amused me at the time, especially as he was doing very well. He had no further trouble after writing the letter. I am, Sirs, yours faithfully,

Port Soudan, Red Sea, Jan. 1st, 1907. EDWARD S. CRISPIN.

[INCLOSURE.]

1. Fever every night.
2. Stiffening and pricking and continuous pain in the operated fissure.
3. Stool descends with blood and matter but with great difficulty and pain.
4. The glands between the sex and the thies are swollen and paining.
5. The legs freezing from the knee to the foot especially the right one.
6. Pain in the loins beside the abdomen on both the sides and under the abdomen and the waist and in the back sometimes.
7. General uneasiness sometimes to suffocation and sleeplessness.
8. Can't sit or can't lie down easily.
9. The dressing goes out for more than 20 hours in a day—though sometimes it may stick well.
10. Some softening and calming ointment is advisable for the inside of the wound so that it may draw out all the matter from inside (as Mercury does and there is no fear if the dressing goes out) and keep the place soft and glissy for the stool to come out easily.
11. Some medicine advisable for purifying and strengthening the blood to get a quick cure as (quinine, Iron, walnut &c do .....

25/12/1908.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

To the Editors of THE LANCET.

SIRS,—Can any of your readers recommend to me any book dealing with the medical inspection of school children? Is there any reliable literature available on the subject of the education of defective (mentally) children and of children who stammer? If you could give me any information on these points through the medium of THE LANCET I should be very much obliged.

I am, Sirs, yours faithfully,

Feb. 11th, 1907. QUAERENS.

Tactile Aphasia.—We have received an interesting note upon this subject which bears no evidence, direct or inferential, of its authorship.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.)

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIE IES.

MONDAY (18th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M.: Lettsomian Lecture:—Dr. C. E. Beevor: The Diagnosis and Localisation of Cerebral Tumours.

TUESDAY (19th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M.: Dr. D. Forsyth: The Parathyroid Gland in Man.—Dr. W. L. Harnett: A Histological Study of the Human Parathyroid Gland.—Dr. F. A. Bambridge and Dr. P. E. Parkinson: The Morbid Histology of the Suprarenal Gland.—Dr. W. O. Meek: A Rare Variety of Cardiac Degeneration.

THERAPEUTICAL SOCIETY (Apothecaries' Hall, Blackfriars, E.C.).—4.30 P.M.: Ladies' Day and Conversazione. There will be Various Exhibits. Paper:—Dr. Crichton: The Metric System in Prescribing and Dispensing.

WEDNESDAY (20th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M.: Exhibition of Slides of Marine Zoological Objects lent by Mr. Flatters. Papers:—Mr. J. W. Gordon: An Early Criticism of the Abbé Theory.—Mr. J. Murray: Some Tardigrada of the Sikkim Himalaya.—Dr. E. Penard: On Some Rhizopods from the Sikkim Himalaya.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M.: Mr. H. Williams: Cold Storage and Food Supply.

THURSDAY (21st).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos street, Cavendish-square, W.).—8.30 P.M.: Annual General Meeting. Election of Officers. Presidential Address:—Dr. C. E. Beevor: The Distribution of the Arteries supplying the Human Brain.

FRIDAY (22nd).—BRITISH ELECTROTHERAPEUTIC SOCIETY (11, Chandos-street, Cavendish square, W.).—8 P.M.: Council. 8.30 P.M.: Paper:—Dr. S. Sloan: Some Physiological Effects of High Frequency Currents in Disease (illustrated by lantern slides and apparatus).

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M.: Mr. R. Johnson and Mr. C. H. Reynolds: Case of Spinal Meningocele in an Adult Successfully Treated by Operation after Spontaneous Rupture had occurred.—Mr. C. H. Fagge: Resection of the Jejunum and Colon for Carcinoma of the former.—Mr. T. H. Kellock: A New Method of Excising the Shoulder-joint.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. G. Pernet: Clinique. (Skin.) 5.15 P.M.: Lecture:—Dr. L. Guthrie: Delayed Poisoning by Anæsthetics.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—12 noon: Pathological Demonstration:—Dr. G. C. Low. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays. Mr. Dunn: Diseases of the Eye. 5 P.M.: Lecture:—Mr. Baldwin: Practical Surgery.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Cliniques: Medical Out-patient (Dr. Whipham), Throat, Nose, and Ear (Mr. Carson); X Ray Demonstration (Dr. Pirie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Sir D. Duckworth: Medicine. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. StClair Thomson: Diseases of the Throat, Nose, and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat. 3.15 P.M.: Special Lecture:—Mr. W. Turner: Abdominal Catastrophes.

TUESDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. L. Williams: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. P. Stewart: Disorders of Sleep.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcology. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. X Rays. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. Moullin: Ectopic Gestation and Pelvic Hæmorrhage.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—10 30 A.M.: Clinique:—Medical Out-patient (Dr. Auld). 2.30 P.M.: Surgical Operations (Mr. Carson); Cliniques: Gynæcological Out-patient (Dr. Giles), Surgical Out-patient (Mr. Edmunds). 4.30 P.M.: Lecture:—Dr. Giles: Some Difficulties in Gynæcological Diagnosis.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. T. Hewlett: Medicine. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Sir W. Gowers.

CHARING CROSS HOSPITAL.—4 P.M.: Demonstration:—Dr. Fenton: (Medical). (Post-Graduate Course.)

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—3 P.M.: Prof. W. Stirling: The Visual Apparatus of Man and Animals.

WEDNESDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. C. Ryall: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. P. Horrocks: The Uterine Curette and its Uses.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and

Surgical Clinics. 2.30 P.M.: Operations. X Rays. Dr. Robinson: Diseases of Women. 5 P.M.: Mr. Ll. Williams: Extractions.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Cliniques:—Dermatological (Dr. Meachen), Ophthalmological (Mr. Brooks), Medical Out-patient (Dr. Whipham).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. F. Taylor: Medicine. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye. Special Lecture:—Dr. F. Taylor: Leukæmia.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M.: Lecture:—Dr. Maguire: The Treatment of Thoracic Aneurysm, with demonstration of selected cases.

THURSDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. G. N. Pitt: Associated Abdominal and Thoracic Disease.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays. Mr. Dunn: Diseases of the Eye. 5 P.M.: Lecture:—Dr. R. H. Cole: The Diagnosis and Treatment of General Paralysis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Gynæcological Operations (Dr. Giles). Cliniques:—Medical (Dr. Whiting), Surgical Out-patient (Mr. Carson). 3 P.M.: Clinique:—Medical In-patient (Dr. Chappel). 4.30 P.M.: Lecture:—Dr. Corner: Mental Disorders associated with Pregnancy and Parturition.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Dr. H. Cooper: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M.: Chesterfield Lecture:—Dr. M. Dockrell: Fungous Diseases of the Skin: I., Tinea Circinata; II., Imbricata, Versicolor; III., Erythrasma; IV., Actinomycosis; V., Madura Foot.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. Clogg: Demonstration (Surgical). (Post-Graduate Course.)

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M.: Lecture:—Dr. Thompson: Mitral Stenosis.

FRIDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. L. Lack: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcology. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. X Rays. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. Abraham: Cases of Skin Disease.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld), Ophthalmological (Mr. Brooks). 3 P.M.: Clinique:—Medical In-patient (Dr. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. A. Turner: Disseminated Sclerosis.

SATURDAY (23rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: Operations. X Rays. Dr. Robinson: Diseases of Women.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—3 P.M. Prof. J. J. Thomson: Röntgen, Cathode, and Positive Rays.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1906, which was completed with the issue of Dec. 29th, were given in THE LANCET of Jan. 5th, 1907.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1906 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 14th, 1907.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb. 8	29·962	SSW	...	57	40	30	32	34	Cloudy
,, 9	29·824	S.W.	...	46	42	34	37	38	Raining
,, 10	29·880	W.	0·13	74	47	32	33	35	Foggy
,, 11	29·644	W.	0·34	64	43	32	39	39	Cloudy
,, 12	29·222	S.W.	0·02	51	47	36	37	38	Overcast
,, 13	29·376	NNW	0·27	46	41	37	37	39	Overcast
,, 14	30·148	N.	...	62	41	36	36	37	Cloudy

During the week marked copies of the following newspapers have been received:—*Daily Telegraph, Daily News, St. Louis Medical Review (U.S.A.), Liverpool Daily Post, Surrey Advertiser, Westminster Gazette, Yorkshire Post, Army and Navy Gazette, Morning Post, Birmingham Weekly Post, Sheffield Telegraph, Yorkshire Observer, Newcastle Chronicle, Manchester Guardian, Daily Chronicle, Islington Gazette, &c.*

Communications, Letters, &c., have been received from—

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